

**Twin Hills Union School District
Board of Trustees Regular Meeting
May 11, 2023
Agenda**

May 11, 2023

Location: Apple Blossom MUR

OPEN SESSION 4:30pm -- CLOSED SESSION 5:30pm

ADA Compliance

In compliance with Government Code § 54954.2(a), the Twin Hills Union School District, will, on request, make this agenda available in appropriate alternative formats to persons with a disability, as required by Section 202 of the American with Disabilities Acts of 1990 (42 U.S.C. § 12132), and the federal rules and regulations adopted in implementation thereof.

Individuals who need this agenda in an alternative format or who need a disability-related modification or accommodation in order to participate in the meeting should contact Laurie Brown, Administrative Assistant, Twin Hills Union School District, 700 Watertrough Rd, Sebastopol, CA 95472 Telephone (707) 823-0871.

AB2449 Virtual Meeting Requirements: Board Member and members of the public attending virtually must disclose whether any individuals 18 years or older are present in the same room and the nature of the relationship.

All open session documents that are distributed to the Board of Trustees are available for public review in the Twin Hills Union School District Office. The agenda is available at www.thusd.k12.ca.us.

1. Call to Order 4:30
 - A. Flag Salute
 - B. Roll Call/ Establishment of Quorum
2. Approval of Agenda Action 4:32
3. Approval of Minutes: Action 4:33
 - A. Regular Meeting on April 13, 2023
 - B. Special Meeting on April 20, 2023
4. Open Session - Public Comment 4:35

Members of the Public are entitled to speak on matters not on the agenda at this time. Please state your name and school, and keep your comments concise, brief, and limited to two minutes or less. There is a ten minute limit on any one topic. The Brown Act restricts the Board from considering any item not appearing on the posted agenda.

Members of the public are entitled to speak to any item on the agenda immediately after the item is called by the Board President. Each person is entitled to speak on any agenda item only once at any meeting. Participation in debate on any item before the board shall be limited to members of the Board. Comments are limited to two minutes per individual and ten minutes per agenda item.
5. Consent Action 4:45

The following items are presented for overall approval:

 - A. Donation Report
 - B. Payroll and Expenditures
 - C. Purchase Order Report
 - D. Employment: See attached exhibit for details
 - E. 2023-24 Contract: Revolution Foods
 - F. 2023-24 Contract: Finals site

**Twin Hills Union School District
Board of Trustees Regular Meeting
May 11, 2023
Agenda**

- | | |
|---|-------------|
| 6. Administrative Reports | 4:50 |
| A. Twin Hills School District, Anna-Maria Guzman, Ed.D., Superintendent | |
| B. Monthly Financial Report, Patty Nosecchi, Business Manager | |
| a. SCOE notification RE: 2 nd Interim certification | |
| 7. Board of Trustees Reports | 5:00 |
| 8. Request Approval of Resolution 2023-566:
Hazard Mitigation Plan | Action 5:05 |
| 9. Request Approval of 2023-24 Calendar SunRidge School | Action 5:15 |
| 10. Request Approval of Resolution 2023-565:
Establish Temporary Interfund Transfers 2023-24 | Action 5:20 |
| 11. Request Approval of Resolution 2023-564:
Final Release Certificated Administrative Assignment | Action 5:25 |
| 12. Closed Session | 5:30 |
| A. Public Comment: At this time members of the public may express opinions or make statements regarding items in the Closed Session. Action may not be taken on statements or testimony made regarding any item not on the Agenda. In the interest of time, there will be a limit of two minutes placed on each individual making a statement. Comments for closed session are limited to ten minutes per item. | |
|
Public Zoom Meeting will be closed
Members of the Board will login to Closed Session Zoom Meeting | |
| B. Closed Session to Consider and/or take action upon the following items: | |
| a. Personnel | |
| C. Return to Open Session and report on any action in Closed Session | |
| 13. Adjournment | 5:50 |

Dr. Anna-Maria Guzman, Twin Hills USD is inviting you to a scheduled Zoom meeting.

Topic: May Board Meeting

Time: May 11, 2023 04:30 PM Pacific Time (US and Canada)

Join Zoom Meeting

<https://twinhillsusd-org.zoom.us/j/89904792578>

Meeting ID: 899 0479 2578

One tap mobile

+16468769923,,89904792578# US (New York)

+16469313860,,89904792578# US

Dial by your location +1 646 876 9923 US (New York) +1 646 931 3860 US +1 301 715 8592 US (Washington DC) +1 305 224

1968 US +1 309 205 3325 US +1 312 626 6799 US (Chicago) +1 689 278 1000 US +1 719 359 4580 US +1 253 205 0468 US +1 253

215 8782 US (Tacoma) +1 346 248 7799 US (Houston) +1 360 209 5623 US +1 386 347 5053 US +1 408 638 0968 US (San Jose)

+1 507 473 4847 US +1 564 217 2000 US +1 669 444 9171 US +1 669 900 6833 US (San Jose) Meeting ID: 899 0479 2578 Find

your local number: <https://twinhillsusd-org.zoom.us/j/kdWFbygpNn>

**TWIN HILLS UNION SCHOOL DISTRICT
BOARD OF TRUSTEES REGULAR MEETING
April 13, 2023
MINUTES**

1. The Board Meeting was called to order at 4:30 pm by President Ost.
 - A. Flag salute
 - B. All present
2. Motion to approve agenda with deletions of Item 10C by Trustee Harding and Second by Trustee Moise. Approved 5-0.
3. Motion to approve the minutes of the Regular meeting of March 9 2023, by Trustee Moise and Second by Trustee Beck. Approved 5-0.
4. Open Session.
5. Motion to approve consent items by Trustee Beck and Second by Trustee Bechtel. Approved 5-0.
6. Administrative Reports including site safety information presented by Principals.
7. Board Member Reports.
8. Update on THUSD Goals presented by Superintendent Guzman.
9. Motion to appoint two board members, John Moise and Jeff Harding, to the 23-24 Ad Hoc Budget committee by Trustee Beck and Second by Trustee Bechtel.
10. Motion to approve 2023-24 Calendars for District/Apple Blossom/Twin Hills CMS and Orchard View School by Trustee Moise and Second by Trustee Harding. Approved 5-0.
11. Motion to approve Overnight Field Trips: A. Jug Handle Creek Farm, by Trustee Moise and Second by Trustee Bechtel. B. Henry Cowell State Park by Trustee Beck and Second by Trustee Bechtel. Approved 5-0.
12. Motion to approve Board Policies BP0415 Equity and BP4113 Assignment of Certificated Personnel by Trustee Beck and Second by Trustee Harding. Approved 5-0.
13. Closed session started 6:05pm. Returned from closed session with nothing to report.
14. Adjournment 7:15 pm.

Respectfully submitted,

Anna-Maria Guzman, Ed.D.
Recording Secretary to the Board of Trustees

Approved:

John Moise, Board Clerk

Michael Ost, Board President

**TWIN HILLS UNION SCHOOL DISTRICT
BOARD OF TRUSTEES SPECIAL MEETING
April 20, 2023
MINUTES**

1. The Special Board Meeting was called to order at 5:00 pm by President Ost. All board members present.
2. Motion to approve agenda by Trustee Moise and Second by Trustee Harding. Approved 5-0.
3. Open Session.
4. Closed Session. Returned from closed session, nothing to report.
5. Adjournment 7:29pm.

Respectfully submitted,

Anna-Maria Guzman, Ed.D.
Recording Secretary to the Board of Trustees

Approved:

John Moise, Board Clerk

Michael Ost, Board President

TWIN HILLS UNION SCHOOL DISTRICT

Consent Calendar: Acceptance of Donations

APRIL 1 THROUGH APRIL 30, 2023

Date Received	Donor	Amount	Purpose
District 53, Fund 01: Apple Blossom Elementary School /General District			
<u>Total</u>		<u>\$0.00</u>	
District 53, Fund 03: Twin Hills Charter Middle School			
<u>Total</u>		<u>\$0.00</u>	
District 53, Fund 09: Orchard View Charter School			
<u>Total</u>		<u>\$0.00</u>	
District 53, Fund 12: Apple Blossom After School Program			
<u>Total</u>		<u>\$0.00</u>	
District 21, Fund 09: SunRidge Charter School			
04/01-30/23	Various families	\$14,314.98	Pledges/specialty pgm 2022-23
<u>Total</u>		<u>\$14,314.98</u>	

Thank you to all our donors, your support is greatly appreciated.

Note: Generally, donations are recorded here when funds are deposited to SCOE account.

Donations marked * have not yet been deposited to SCOE.

{Date Received may actually be date deposited to bank or SCOE}

For the May 11, 2023 board meeting.

ReqPay12b

Board Report

Checks Dated 04/01/2023 through 04/30/2023

Board Meeting Date May 11, 2023

Check Number	Check Date	Pay to the Order of	Check Amount
1955381	04/07/2023	Kinetic Solutions Inc.	5,359.90
1955382	04/07/2023	All About Learning Press, Inc.	168.13
1955383	04/07/2023	Castleberry, Diana	90.00
1955384	04/07/2023	Conradson, Shari	400.00
1955385	04/07/2023	Conversa Speech & Lang Therapy	2,400.00
1955386	04/07/2023	Kyocera Document Solutions Northern CA	1,767.68
1955387	04/07/2023	Copperfield's Books	135.36
1955388	04/07/2023	Cordoza, Jenna	25.00
1955389	04/07/2023	Jacobsen-McCarthy, Michelle	12,800.00
1955390	04/07/2023	Vive CPR	540.00
1955391	04/07/2023	CUE, Inc.	199.00
1955392	04/07/2023	Recology Sonoma Marin	943.08
1955393	04/07/2023	Recology Sonoma Marin	473.71
1955394	04/07/2023	Sonoma County Office Of Educ.	12,250.00
1955395	04/07/2023	Shura, Samantha	2,940.00
1955396	04/07/2023	Alpha Analytical Laboratories	342.00
1955397	04/07/2023	Alhambra	64.92
1955398	04/07/2023	Fishman Supply Company	924.63
1955399	04/07/2023	Friedman's Home Improvement	1,159.30
1955400	04/07/2023	Green, Justin	25.00
1955401	04/07/2023	Greene, Janet	1,125.00
1955402	04/07/2023	T-Mobile	84.72
1955403	04/07/2023	Juniper, Meryl	675.00
1955404	04/07/2023	Komrij, Jacqueline	233.26
1955405	04/07/2023	New AnswerNet, Inc.	22.00
1955406	04/07/2023	Nasco	526.20
1955407	04/07/2023	ODP Business Solutions, LLC	232.12
1955408	04/07/2023	Sebastopol Hardware Center	161.33
1955409	04/07/2023	Stehling, Stefan	1,980.00
1955410	04/07/2023	Steinberg, Korin	190.03
1955411	04/07/2023	Wooley Learning, Inc.	150.00
1955412	04/07/2023	Walsh, Colleen	27.00
1955413	04/07/2023	RH and Sons Water Services	50.00
1956693	04/14/2023	ATT	306.09
1956694	04/14/2023	ATT	12.95
1956695	04/14/2023	ATT	110.61
1956696	04/14/2023	ATT	159.50
1956697	04/14/2023	ATT	27.11
1956698	04/14/2023	ATT	27.11
1956699	04/14/2023	Revolution Foods PBC	23,121.55
1956700	04/14/2023	Cirimele, Terri	35.19
1956701	04/14/2023	Kyocera Document Solutions Northern CA , Inc.	260.42
1956702	04/14/2023	Kyocera Document Solutions Northern CA	146.53
1956703	04/14/2023	Fritsch, Tosh	1,854.20
1956704	04/14/2023	LIFEmaps LLC	550.00
1956705	04/14/2023	Creative Ceramics	228.06
1956706	04/14/2023	Department Of Justice	256.00
1956707	04/14/2023	Alhambra	94.92
1956708	04/14/2023	DuVall, Maura	320.03

The preceding Checks have been issued in accordance with the District's Policy and authorization of the Board of Trustees. It is recommended that the preceding Checks be approved.

ESCAPE ONLINE

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Board Report

Checks Dated 04/01/2023 through 04/30/2023

Board Meeting Date May 11, 2023

Check Number	Check Date	Pay to the Order of	Check Amount
1956709	04/14/2023	Galbraith, Sunshine	90.74
1956710	04/14/2023	Harmony Farm Supply	110.06
1956711	04/14/2023	LaLonde, Therese	522.43
1956712	04/14/2023	Hendrix Chainsaw	108.80
1956713	04/14/2023	Terminix Processing Center	72.00
1956714	04/14/2023	Redwood Pediatric Therapy Associates Inc.	1,481.22
1956715	04/14/2023	Romero, Jessica	526.93
1956716	04/14/2023	Schott, Elizabeth	85.62
1956717	04/14/2023	Turner, Elise	83.14
1956718	04/14/2023	Weeks Drilling & Pump Co.	862.82
1956719	04/14/2023	Woodwind Brasswind	112.02
1958012	04/21/2023	Bankcard Center	2,150.13
1958013	04/21/2023	Bolt, Dennis	125.00
1958014	04/21/2023	Eastshore Consulting LLC	1,575.00
1958015	04/21/2023	TIAA, FSB	332.01
1958016	04/21/2023	Kyocera Document Solutions Northern CA , Inc.	432.92
1958017	04/21/2023	Kyocera Document Solutions Northern CA , Inc.	631.48
1958018	04/21/2023	Kyocera Document Solutions Northern CA	1,539.68
1958019	04/21/2023	Creative Ceramics	123.43
1958020	04/21/2023	Alhambra	58.94
1958021	04/21/2023	Mountain Fresh Spring Water	70.00
1958022	04/21/2023	Employment Development Dept.	8,642.70
1958023	04/21/2023	Harmony Farm Supply	526.46
1958024	04/21/2023	Energy Plus	200.84
1958025	04/21/2023	Mobile Modular Mgmt Corp.	1,770.00
1958026	04/21/2023	ODP Business Solutions, LLC	110.25
1958027	04/21/2023	Precision Wireless Service	161.05
1958028	04/21/2023	Scarola, Russell	190.79
1958029	04/21/2023	Thomson Reuters - West	125.86
1958030	04/21/2023	CTR for Effective Philanthropy	1,100.00
1958031	04/21/2023	Wills, Cheryl	6.99
1958722	04/26/2023	Fritsch, Tosh	3,986.52
1958723	04/26/2023	Associated Plumbing Tech	1,299.20
1958724	04/26/2023	Procare Software LLC	1,068.00
1958725	04/26/2023	Twin Hills Usd Afterschool Pgm	3,456.41
Total Number of Checks			84
			109,714.08

Fund Recap

Fund	Description	Check Count	Expensed Amount
01	General Fund	50	64,523.86
03	Charter School: Twin Hills	20	7,140.19
09	Charter School Fund: Orchrd Vw	23	9,506.82
12	Child Development Fund	6	4,845.43
13	Cafeteria Fund	3	23,697.78
Total Number of Checks		84	109,714.08
Less Unpaid Tax Liability			.00
Net (Check Amount)			109,714.08

The preceding Checks have been issued in accordance with the District's Policy and authorization of the Board of Trustees. It is recommended that the preceding Checks be approved.

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ReqPay12b

Board Report

Checks Dated 04/01/2023 through 04/30/2023

Board Meeting Date May 11, 2023

Check Number	Check Date	Pay to the Order of	Check Amount
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Total Expenditures April 2023

Total Vendor Warrants April 30, 2023	\$	109,714.08
Payroll: April 10, 2023 Supplemental		20,565.52
Payroll: April 30, 2023 Regular		586,435.10
Total PR & Expenditures	\$	716,714.70

The preceding Checks have been issued in accordance with the District's Policy and authorization of the Board of Trustees. It is recommended that the preceding Checks be approved.

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Checks Dated 04/01/2023 through 04/30/2023

Board Meeting Date May 11, 2023

Check Number	Check Date	Pay to the Order of	Check Amount
1955186	04/07/2023	Kinetic Solutions, Inc.	1,649.20
1955187	04/07/2023	Allison, Esther	94.49
1955188	04/07/2023	Kyocera Document Solutions Northern CA	784.92
1955189	04/07/2023	Recology Sonoma Marin	602.21
1955190	04/07/2023	Fircrest Market	338.14
1955191	04/07/2023	Fishman Supply Company	1,439.46
1955192	04/07/2023	Friedman's Home Improvement	1,481.03
1955193	04/07/2023	Fuko, Karen	23.45
1955194	04/07/2023	Roberts Mechanical & Elect Inc	434.65
1955195	04/07/2023	Mercurius USA	837.56
1955196	04/07/2023	Morris, Rose	455.23
1955197	04/07/2023	ODP Business Solutions, LLC	205.36
1955198	04/07/2023	Small Jobs Plumbing, Inc.	98.00
1955199	04/07/2023	Rogowski, Jeanne	594.59
1955200	04/07/2023	Sebastopol Hardware Center	779.45
1955201	04/07/2023	Shane, Dan	45.29
1955202	04/07/2023	Smith, Matt	20.00
1955203	04/07/2023	Sonoma County Office Of Educ.	7,000.00
1955204	04/07/2023	Terminix Processing Center	122.00
1955205	04/07/2023	Thomasson, Theresa	147.45
1955206	04/07/2023	Wells Fargo Vendor Fin Serv	393.30
1956438	04/14/2023	Andy's Produce Market	686.20
1956439	04/14/2023	ATT	238.56
1956440	04/14/2023	Revolution Foods PBC	14,824.96
1956441	04/14/2023	Fritsch, Tosh	1,483.36
1956442	04/14/2023	Department Of Justice	32.00
1956443	04/14/2023	Doherty, Crystal	25.00
1956444	04/14/2023	Harmony Farm Supply	143.56
1956445	04/14/2023	Morris, Rose	156.63
1956446	04/14/2023	Sauter, Jonathan	67.07
1956447	04/14/2023	Sebastopol City of	1,895.62
1956448	04/14/2023	Sebastopol City of	194.55
1956449	04/14/2023	Shane, Dan	20.00
1957853	04/21/2023	Bankcard Center	82.87
1957854	04/21/2023	Kyocera Document Solutions Northern CA	91.48
1957855	04/21/2023	Employment Development Dept.	2,441.69
1957856	04/21/2023	Redwood Lock, Inc.	483.45
1957857	04/21/2023	Small Jobs Plumbing, Inc.	1,291.00
1957858	04/21/2023	Quirt, Mark	429.37
1957859	04/21/2023	Ronan, Marcela	21.36
1957860	04/21/2023	Sauter, Jonathan	8.58
1957861	04/21/2023	CTR for Effective Philanthropy	250.00
1957862	04/21/2023	Pellascini, Richard L.	17,864.88
1957863	04/21/2023	Kyocera Document Solutions	204.30
1958462	04/26/2023	Fritsch, Tosh	2,317.75
1958463	04/26/2023	Georgeson-Bowen, Rosemary	20.00
1958464	04/26/2023	Hensley, Lisa	20.00
1958465	04/26/2023	Kirchman, John	25.00
1958466	04/26/2023	PG&E	3,260.48

The preceding Checks have been issued in accordance with the District's Policy and authorization of the Board of Trustees. It is recommended that the preceding Checks be approved.

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Checks Dated 04/01/2023 through 04/30/2023

Board Meeting Date May 11, 2023

Check Number	Check Date	Pay to the Order of	Check Amount
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Total Number of Checks	49	66,125.50
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Fund Recap

Fund	Description	Check Count	Expensed Amount
09	General Fund (charter Schools)	49	66,125.50
	Total Number of Checks	49	66,125.50
	Less Unpaid Tax Liability		.00
	Net (Check Amount)		66,125.50

Total Expenditures April 2023

Total Vendor Warrants April 30, 2023	\$	66,125.50
Payroll: April 10, 2023 Supplemental		12,027.14
Payroll: April 30, 2023 Regular		156,377.33
Total PR & Expenditures	\$	234,529.97

The preceding Checks have been issued in accordance with the District's Policy and authorization of the Board of Trustees. It is recommended that the preceding Checks be approved.

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Includes Purchase Orders dated 04/01/2023 - 04/30/2023 ***					Board Meeting Date May 11, 2023
PO Number	Vendor Name	Loc	Description	Fund Object	Account Amount
P23-00393	Christy White, Inc.	9DSO	PO #7244 - 2022-23 AUDIT REPORT & VISIT	01-5821	15,000.00
P23-00415	Westcoast Solar Energy	7DSW	PO #7258 - AB/OV/THCMS SOLAR SRVC	14-5630	5,000.00
Total Number of POs			2	Total	20,000.00

Fund Recap

Fund	Description	PO Count	Amount
01	General Fund	1	15,000.00
14	Deferred Maintenance Fund	1	5,000.00
Total			20,000.00

Information is further limited to: (Minimum Amount = 5,000.00)

The preceding Purchase Orders have been issued in accordance with the District's Purchasing Policy and authorization of the Board of Trustees. It is recommended that the preceding Purchase Orders be approved and that payment be authorized upon delivery and acceptance of the items ordered.

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ReqPay11a

Board Report with Fund/Object

Includes Purchase Orders dated 04/01/2023 - 04/30/2023 ***

Board Meeting Date May 11, 2023

PO Changes

	New PO Amount	Fund/ Object	Description	Change Amount
P23-00078	110,500.00	09-4710	General Fund (charter Schools)/Food Service - Food	40,000.00
	Revolution Foods		Increase due to Universal Meals	
Total PO Changes				40,000.00

Information is further limited to: (Minimum Amount = 5,000.00)

The preceding Purchase Orders have been issued in accordance with the District's Purchasing Policy and authorization of the Board of Trustees. It is recommended that the preceding Purchase Orders be approved and that payment be authorized upon delivery and acceptance of the items ordered.

ESCAPE ONLINE

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Twin Hills USD

Monthly Personnel Report

May 11, 2023

Certificated

Additions:

- Zocchetti, Giuliaanna – School Counselor 2023-24, FTE (0.60-1.0) TBD

Changes:

- Gurule, K – SPED Teacher AB – Requesting 20% Leave of Absence for 2023-24 school year.
- Singleton-Morrisseau, Jamie – SR Kindergarten Teacher - Requesting 50% Leave of Absence for 2023-24 school year.

Terminations:

Classified

Additions:

- Heras-Schlegal, Fidelina – SR Instructional Assistant
- Eberly, Brian – SR Specialty Instructor – wood working

Changes:

Terminations:



Customer: Twin Hills Union School District
 Created By: Rory Berg
 New Contract
 5/1/2023
 Proposal Valid for 30 days

FINALSITE ORDER

This Finalsite Order (the “**Order**”) is entered into by and between Active Internet Technologies, dba Finalsite (“**Finalsite**”) and Twin Hills Union School District (“**Customer**”) and sets forth the terms of Customer’s use of the products and services set forth below (“**Pricing Summary**”). This Order, together with the Master Terms and Conditions for Services (the “**Master Terms**”) located at <http://www.finalsite.com/masterterms/useducationagencies> and incorporated herein by this reference, form the entire agreement between the parties in respect of the products and services set forth below. Each of the individuals executing this Order represent and warrant that he or she is authorized to execute this Order on behalf of Customer or Finalsite, as applicable. Unless otherwise specified herein, any capitalized terms used in this Order shall have the meaning defined in the Master Terms. The “**Effective Date**” of this Order is the date on which both parties have signed this Order as reflected in the signature lines below.

In consideration of the promises set forth herein, and other good and valuable consideration, the receipt of which are hereby acknowledged, the parties hereby agree as follows:

A. Pricing Summary

Creative and Deployment Services Package

School Loop Design

The Statement of Work ('SOW') for this Creative Services Package can be reviewed here www.finalsite.com/schoolloop-conv-sow

Composer CMS Platform

Communications Core Platform - Districts

View a detailed description of what's included in your software package here <http://www.finalsite.com/dcc>

Products Included in Communications Core Platform - Districts

Admins with ticketing rights (5)	HTTPS Implementation
Basic Site Search	LDAP/Google Authentication (Network SSO)
Basic Support with integrated ticketing	Live Webinar Training
Blog, News and Subscriptions with Finalsite Posts (20 boards pooled)	Mobile-Friendly, Responsive Design
Data Imports through Finalsite Support (4/year)	Website cloud storage (50 GB)
Digital Asset Management & Document Library with Resources	Page-Based Notifications (Page Pops)
District Site and 4 Additional Sites	Searchable Knowledge Base and Video Access
FERPA-compliant Hosting, Security and Integrated CDN	Site Editors (15)
Finalsite Composer Content Management System	Social Media Feeds (5)
Faculty/Staff Directory & Role	Tiered Permissions and User Management
Finalsite Payments by BlueSnap	Unlimited Calendars (Incl. Integration)
Forms Manager (25 forms pooled)	Unlimited Published Pages

Additional Products or Services:

Creative and Deployment Services

Content Migration	
Modules	
Weglot Pro (5 languages, 200K words)	
Training & Support	
Support Plan - Standard	

Services: Initial Term and Fees:

The initial term of this Order is for the (5) year period beginning from the Effective Date, unless otherwise outlined in the schedule below (the "Initial Term").

Fees for the Initial Term for the Services specified in the table above are set forth below:

Total Setup Cost (USD)
\$7,500

Schedule	Amount
Period 1 - Jul 01 2023	\$ 6,050
Period 2 - Jul 01 2024	\$ 6,050
Period 3 - Jul 01 2025	\$ 6,050
Period 4 - Jul 01 2026	\$ 6,050
Period 5 - Jul 01 2027	\$ 6,050

B. Payment Terms

1. All fees for the initial year of this Order shall be due as follows: (i) Set Up fees shall be invoiced on the Effective Date of this Order and shall be due and payable upon receipt of invoice; (ii) fees for Year 1 (described in the fee table above) shall be invoiced on the Effective Date of this Order or the first day of Year 1, whichever is later, and shall be due and payable upon receipt of invoice; (iii) fees for each subsequent Year of the Initial Term, and for each Renewal Term, shall be invoiced on the commencement of such Year or Renewal Term (as applicable) and shall be due and payable upon receipt of invoice. Fees for any other Services, and for reimbursable expenses, shall be invoiced in accordance with the Master Terms or this Order and shall be due and payable upon receipt of invoice.
2. Unless otherwise specified in the Special Provisions above, this Order Form shall be renewed automatically for successive periods of (5) years (each a "Renewal Term") after the expiration of the Initial Term and any subsequent Renewal Term, unless Client provides AIT, or AIT provides Client, with a written notice to the contrary ninety (90) days prior to the end of the Initial Term or Renewal Term, as applicable.
3. Unless otherwise specified, all dollars (\$) are United States currency.
4. Sales/VAT Tax: If applicable, a copy of Customer's Sales/VAT Tax Direct Pay Certificate or its Sales/VAT Tax Exemption Certificate must be returned with this Order Form. Otherwise, Finalsite will invoice Customer for applicable sales, use and other transactional taxes due in connection with the Services or the fees due therefor.
5. Except as otherwise specified in this Order, fees are subject to increase in accordance with the applicable provisions of the Master Terms.

By signing below, Finalsite and Customer each agree to the terms and conditions of this Order and the Master Terms.

Client: Twin Hills Union School District
Signature
Name (printed) Anna-Maria Guzman
Title (printed) Superintendent
Date

Active Internet Technologies ("AIT")
Signature
Name (printed)
Title (printed)
Date

☐ As the Customer Contact, by initialing in this box, I agree on behalf of Customer that I have read the Statement of Work ("SOW") and understand the expected deliverables for Finalsite as well as for Customer's project team. I understand that the project timeline is a good faith estimate which is dependent on, among other factors, Customer's ability to meet respective Customer tasks and deadlines.

C. Client Contact Information

Please fill out the following information, which will be used by our deployment & accounting teams.

Billing Contact Laurie Brown
Title District Admin/Accounts Payable
Address 700 Watertrough Rd
City, State Zip Sebastopol, CA 95472
Phone 707-823-0871
Email lbrown@twinhillsusd.org

Project Contact Steve Loveday
Title District Technology Coord
Phone 707-823-0871
Email sloveday@twinhillsusd.org

*Executive Sponsor (Superintendent, Head of School, CFO, etc.) Patty Nosecchi
Title Business Manager
Email pnosecchi@twinhillsusd.org

*The Executive Sponsor should be separate from the Project Contact and is typically the Superintendent, Head of School, Business Manager, CFO, etc.

TWIN HILLS UNION SCHOOL DISTRICT

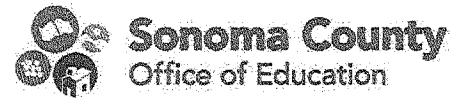
SUPERINTENDENT'S MONTHLY ENROLLMENT REPORT 2022-23

For the May 11, 2023 board meeting

ENROLLMENT MO/YR	2015-16		2016-17		2017-18		2018-19		2019-20				2020-21			
	Sep15	Jun16	Sep 16	Jun 17	Sep 17	Jun18	Sep18	Jun19	Sep19	Jan20	Apr20	Jun20	Sep20	Jan 21	Apr21	2021
Apple Blossom	434	439	431	423	406	399	416	404	396	405	409	408	355	348	344	343
Twin Hills CMS	326	324	330	309	269	262	281	267	246	245	240	240	225	219	220	219
Sub Total	760	763	761	732	675	661	697	671	642	650	649	648	580	567	564	562
Orchard View	222	222	234	228	236	237	236	226	228	226	234	233	247	245	229	227
SunRidge	271	267	276	279	283	281	275	276	282	279	278	279	272	268	263	261
Total	1,253	1,252	1,271	1,239	1,194	1,179	1,208	1,173	1,152	1,155	1,161	1,160	1,099	1,080	1,056	1,050

ENROLLMENT MO/YR	2021-22								2022-23							Estimate @ AB*
	Aug 21	Sep21	Nov21	Jan22	Feb22	Mar22	Apr 22	May 22	Aug 22	Oct 22	Nov 22	Dec22	Jan23	Mar23	Apr23	
Apple Blossom	327	322	321	319	320	319	317	317	295	298	299	299	302	300	299	320
Twin Hills CMS	204	207	208	210	212	210	210	206	204	203	201	201	199	198	198	205
Sub Total	531	529	529	529	532	529	527	523	499	501	500	500	501	498	497	525
Orchard View	217	222	221	224	217	219	219	219	216	216	215	212	211	214	212	222
SunRidge	213	213	213	220	223	219	221	221	241	239	238	238	226	230	230	259
Total	961	964	963	973	972	967	967	963	956	956	953	950	938	942	939	1006

*AB = Adopted Budget



5340 Skylane Boulevard
Santa Rosa, CA 95403-8246
(707) 524-2600 | scoe.org

April 11, 2023

Anna-Maria Guzman, Ed.D., Superintendent
Twin Hills Union School District
700 Watertrough Road
Sebastopol, CA 95472

Dear Dr. Guzman,

In accordance with Education Code Section 42131, a review of Twin Hills Union School District's (District) Second Interim Report for Fiscal Year 2022-23 has been completed by the Sonoma County Office of Education (County). The District self-certified its 2022-23 Second Interim Report as Positive. After a review of the financial data provided by the District, it appears that the District will meet its financial obligations for the current and two subsequent years. Therefore, the County concurs with the District's positive certification.

State Budget

On January 10, 2023, the Governor released the proposed State Budget for the upcoming 2023-2024 fiscal year. Governor Newsom's State Budget proposal assumes a slowing of the economy but still growing at the national and state level. The Budget includes a form of risk and uncertainty by proposing to utilize \$1.4 billion in one-time funds to increase Local Control Funding Formula (LCFF) funding, as well as a mid-year cut to the Arts, Music, and Instructional Material Discretionary Block Grant of approximately 30%. Additionally, as a result of the slowing of state revenues in fiscal year 2022-2023, the Governor's Budget proposals didn't include any new proposals of one-time funds as local education agencies have received throughout the COVID-19 pandemic. The Budget proposal does include an increased statutory cost-of-living-adjustment in 2023-24 of 8.13%, largely driven by inflationary pressures of goods and services.

Second Interim and Multi-Year Projection (MYP)

The District's Second Interim Report MYP, which includes its conversion charter, projects an increase in unrestricted fund balance of \$35,789 in 2022-23, while the MYP projects unrestricted deficit spending of -\$240,437 in 2023-24 and -\$639,171 in 2024-25. The State minimum reserve for economic uncertainty of 4% is met in all years. Deficit spending is of concern to the County and the elimination of structural deficit spending is critical in order to maintain required reserve levels. Therefore, we urge the District to review and monitor revenues, expenditures, and fund balances of all funds.

Collective Bargaining

Based upon the Criteria and Standards, negotiations with all bargaining units in the 2022-23 fiscal year are settled.

Amie R. Carter, Ed.D. | Sonoma County Superintendent of Schools

Board of Education | Gina Cuculis, Herman G. Hernandez, Steven Herrington Ph.D., Peter Kostas, Andrew Leonard

Charter Schools

The District reports Orchard View Charter School outside of the General Fund. The board approved Second Interim Report included Fund 09 for the Charter. The 2022-23 ending balance in Fund 09 reported is \$339,761 with an increase to the fund balance of \$153,448.

Sunridge Charter School reported in Org. 21, Fund 09 and the board approved the Second Interim Report included Fund 09 for the Charter. The 2022-23 ending balance in Fund 09 reported is \$1,154,770 with an increase to the fund balance of \$607,633.

Summary

Our Office appreciates the preparation and timely submittal of your Second Interim report. A technical review will be communicated to the Business Office. **Please see the attached for standard reminders.** If you have any questions, please feel free to call me at (707) 524-2635.

Sincerely,

Sarah Lampenfeld
Director, External Fiscal Services

c:
Patty Nosecchi, District Chief Business Official
Amie R. Carter, Ed.D., County Superintendent of Schools
Greg Medici, SCOE Deputy Superintendent, Business Services

2022-23 Annual Standard Reminders ~ All Districts

Collective Bargaining Disclosure

SCOE Business requests copies of collective bargaining disclosures 10 days prior to board approval. If any collective bargaining settlements are reached during the current year all districts are being reminded of the public disclosure obligation. An important AB 1200 reporting requirement is the statute for tentative collective bargaining agreements to meet the requirements of Government Code Section 3547.5 and Education Code Sections 42131 and 42142, both of which outline the District's responsibilities for public disclosure and budget revisions for collective bargaining agreements. A three-year analysis must be completed to determine the impact of negotiations in future years. The superintendent and chief business officer must certify that the District can meet the costs incurred under the agreement. The governing board must take formal board action to approve the proposed agreement. Please note that within 45 days of the settlement, the District must send to SCOE any revisions to the District's current budget necessary to fulfill the terms of the agreement.

Submission of Studies, Reports, Evaluations and/or Audits

Education Code Sections 42127 and 42127.6 require districts to submit to the County Office any studies, reports, evaluations, or audits done of the district that contain evidence that the district is showing fiscal distress. They also require the County Office to incorporate that information into the analysis of budgets, interim reports, and the District's overall financial condition.

We request that the District submit to this office any such documents commissioned by the District (e.g. reports done by Fiscal Crisis and Management Assistance Team), or by the State Superintendent of Public Instruction and/or a state control agency any time they are received by your District.

SB740

Please note that a SB740 funding determination may be required when a charter school offers instructional time in a non-classroom-based setting. Charter schools that do not submit a request by the due date may not receive a funding determination, and could have their State apportionment associated with its non-classroom-based ADA reduced to zero. SB740 regulations, instructions and form can be found at:

<https://www.cde.ca.gov/sp/ch/nclrbifunddet.asp>

Requirements for Debt Management Policy and Practices

Effective January 1, 2017, (per Senate Bill (SB) 1029, Hertzberg) issuers must certify on the **Report of Proposed Debt Issuance** (<http://www.treasurer.ca.gov/cdiac/reporting.asp>) that they have:

- ✦ Adopted local debt policies concerning the use of debt; and
- ✦ The proposed debt issuance is consistent with those policies.

The issuer's **local debt policies** must include (A) through (E), below:

- A. The purposes for which the debt proceeds may be used.
- B. The types of debt that may be issued.
- C. The relationship of the debt to, and integration with, the issuer's capital improvement program or budget, if applicable.
- D. Policy goals related to the issuer's planning goals and objectives.
- E. The internal control procedures that the issuer has implemented, or will implement, to ensure that the proceeds of the proposed debt issuance will be directed to the intended use.

FCMAT has prepared a Fiscal Alert which provides a **sample Debt Management Policy** which is located at <http://fcmat.org/fcmat-fiscal-and-legal-alerts/>.

SB 1029 contains a declaration that state and local agencies should adopt comprehensive written debt management policies pursuant to the recommendation of the Government Finance Officers Association (GFOA). The GFOA is a national association of government finance professionals with a shared mission to promote excellence in state and local government financial management. The GFOA provides **best practices** and a link to the ***Debt Issuance Checklist: Considerations When Issuing Bonds*** at <http://www.gfoa.org/debt-management-policy> (bottom of the webpage).

California Debt and Investment Advisory Commission's (CDIAC) website contains the necessary reporting forms and fees which can be found at the website <http://www.treasurer.ca.gov/cdiac/reporting.asp>. CDIAC's guidance regarding SB1029 is located at <http://www.treasurer.ca.gov/cdiac/> by clicking on "Guidance on 1029 Implementation with SB1029" on the left side of the webpage. Some of its guidance is noted below:

Government Code 8855(i) requires any issuer of public debt to provide a *Report of Proposed Debt Issuance* to the California Debt Investment and Advisory Commission *no later than 30 days before the sale* of such debt.

Government Code section 8855(k) ~ Effective January 1, 2017, state and local issuers are required to submit an **annual debt transparency report** for any issue of debt for which they have submitted a *Report of Final Sale* during the reporting period. The annual debt transparency report is due to CDIAC within seven (7) months of the close of the reporting period, defined as July 1st to June 30th. This provision makes January 31st the effective deadline for submittal of the annual debt transparency report. Debt issued between January 1, 2017 and June 30, 2017, and reported to CDIAC on or after January 21, 2017 will be required to submit an annual debt transparency report no later than January 31, 2018.

Minimum annual debt transparency report information and additional requirements/stipulations apply. Please see the Guidance from CDIAC for more detailed information.

Reporting Requirements for Proposed Debt Issuances

AB 2274 amended Government Code Section 8855 and is effective January 1, 2015. It requires LEAs to notify the California Debt Investment Advisory Commission (CDIAC) of **any proposed debt issuance**, which would include refinancing and other secondary issuances. In addition, the bill established reporting timeframes. No later than 30 days *prior to the sale* of any debt issue, the issuer shall submit a report of the proposed issuance to CDIAC. Not later than 21 days *after the sale* of the debt, the issuer shall submit a report of final sale to CDIAC. Instructions to all of

the requirements that CDIAC needs depending on the type of debt transaction and applicable reporting forms are available at: <http://www.treasurer.ca.gov/cdiac/reporting.asp>

AB 2551 enhances transparency requirements for local bond elections, including Proposition 39 (2000) and two-thirds vote general obligation bonds. The bill requires LEAs attempting to pass local bonds to *submit to their local elections office* the total estimated debt service, including principal and interest, if all bonds are issued, as part of the Tax Rate Statement required pursuant to Elections Code Sections 9400-9401. The aforementioned reporting requirements are applicable to any issuance of debt after AB 2274 adds reporting requirements to debt from bonds already approved by voters. It requires agencies to notify CDIAC of *any* proposed debt issuance, which **would include refinancing and other secondary issuances. The provisions of AB 2551 will be required for any local bond elections after January 1, 2015.**

Reporting Requirements for Non-Voter-Approved Debt

Education Code Section 17150 requires school districts to notify the County Superintendent of Schools and County Auditor at least 30 days prior to the governing boards' approval of the issuance of certificates of participation (COPs) or other non-voter-approved debt secured by real property such as: Lease purchases (LP) secured by real property; Qualified Zone Academy Bonds (QZABs) secured by real property; Revenue bonds; Energy Loans or Bond Anticipation Notes (BANs). Under the new law, the district must provide repayment schedules, evidence of the ability to repay, and costs of issuance as well as information necessary to assess the anticipated effect of the debt issuance. Within 15 days of the receipt of the information, the County Superintendent of Schools and the County Auditor are authorized to comment publicly regarding the district's capacity to repay the debt obligation, based on the information provided.

Additional Standard Reminders for School Districts with Qualified or Negative Certifications

Debt Issuance

The statutory requirements for debt issuance for school districts with qualified or negative interim report certifications are specifically addressed by E.C. Section 42133(a), and read as follows:

"A school district that has a qualified or negative certification in any fiscal year may not issue, in that fiscal year or in the next succeeding fiscal year, certificates of participation, tax anticipation notes, revenue bonds, or any other debt instruments that do not require the approval of the voters of the district, nor may the district cause an information report regarding the debt instrument to be submitted pursuant to subdivision (e) of Section 149 of Title 26 of the United States Code, unless the county superintendent of schools determines, pursuant to criteria established by the Superintendent of Public Instruction, that the district's repayment of that indebtedness is probable. A school district is deemed to have a qualified or negative certification for purposes of this subdivision if, pursuant to this article, it files that certification or the county superintendent of schools classifies the certification of that fiscal year to be qualified or negative."

E.C. Section 15140 (b) notes that a district that has received a qualified or negative certification in its most recent interim report, may not issue and sell bonds on its own behalf pursuant to this chapter without further action of the board of supervisors or officers of that county or of any other county in which a portion of the school district or community college district is located.

Collective Bargaining

Government Code Section 3540.2 provides added oversight related to the collective bargaining process. Any school district with a Qualified or Negative certification under Education Code Section 42131 **shall allow the county office of education at least ten working days to review and comment on any proposed agreement made between the exclusive representative and the public school employer, or designated representative, before it is ratified.** The school district shall provide the county office with all information relevant to yield an understanding of financial impact of that agreement. The county superintendent shall notify the school district, county board of education, district superintendent, governing board of the school district, and each parent and teacher organization of the district within those 10 days if, in his or her opinion, the agreement would endanger the fiscal well-being of the school district.

Per Government Code 3540.2(d), a school district shall, upon request, provide the county superintendent of schools with all information relevant to provide an understanding of the financial impact of any final collective bargaining agreement reached.

2022 MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN



WHAT IS HAZARD MITIGATION?

*PROJECTS AND PROGRAMS THAT MINIMIZE OR
ELIMINATE THREATS ASSOCIATED WITH HAZARDS*





WHY PREPARE A HAZARD MITIGATION PLAN?

- Disaster Mitigation Act of 2000
 - Requires Mitigation Plan for Grant Eligibility for Pre- and Post-Disaster



PROJECT MANAGEMENT

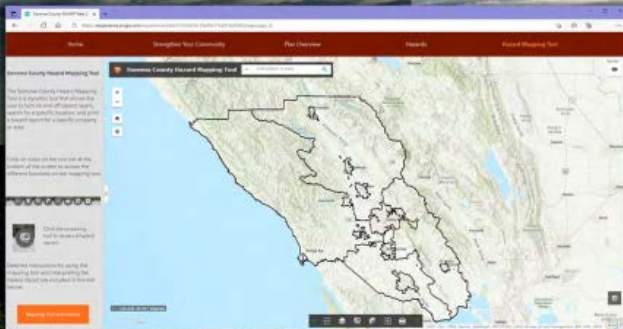
- Sonoma County Office of Education
- Participating Entities
- Project Area Profile
 - Hazard History, Geography, Demographics, Mapping
- Risk Assessment
 - Vulnerability and Impact to Facilities
- Develop Mitigation Actions
- Community Outreach
- Formal Review



Sonoma County Multijurisdictional Hazard Mitigation Plan Update 2021

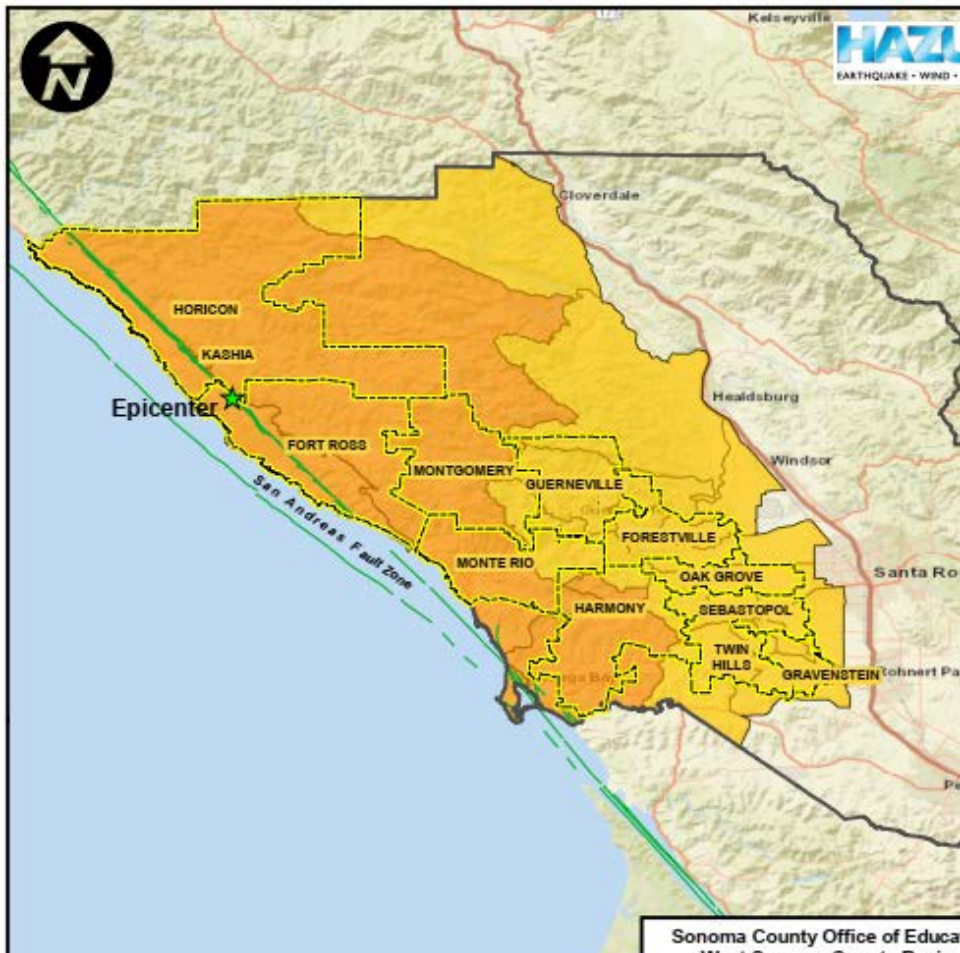
**Volume 1
Area-Wide Elements**

October 2021

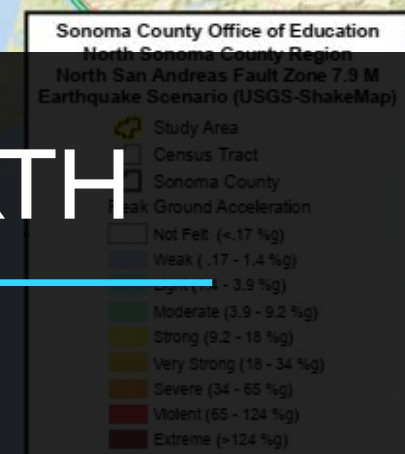
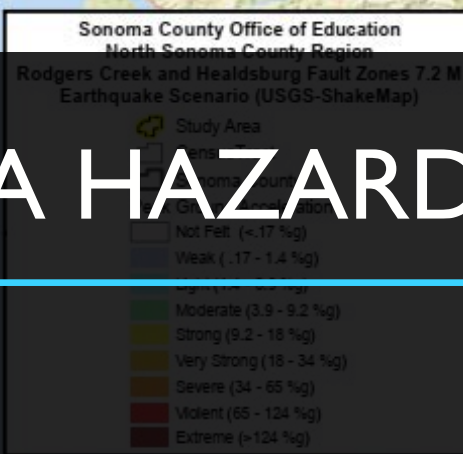
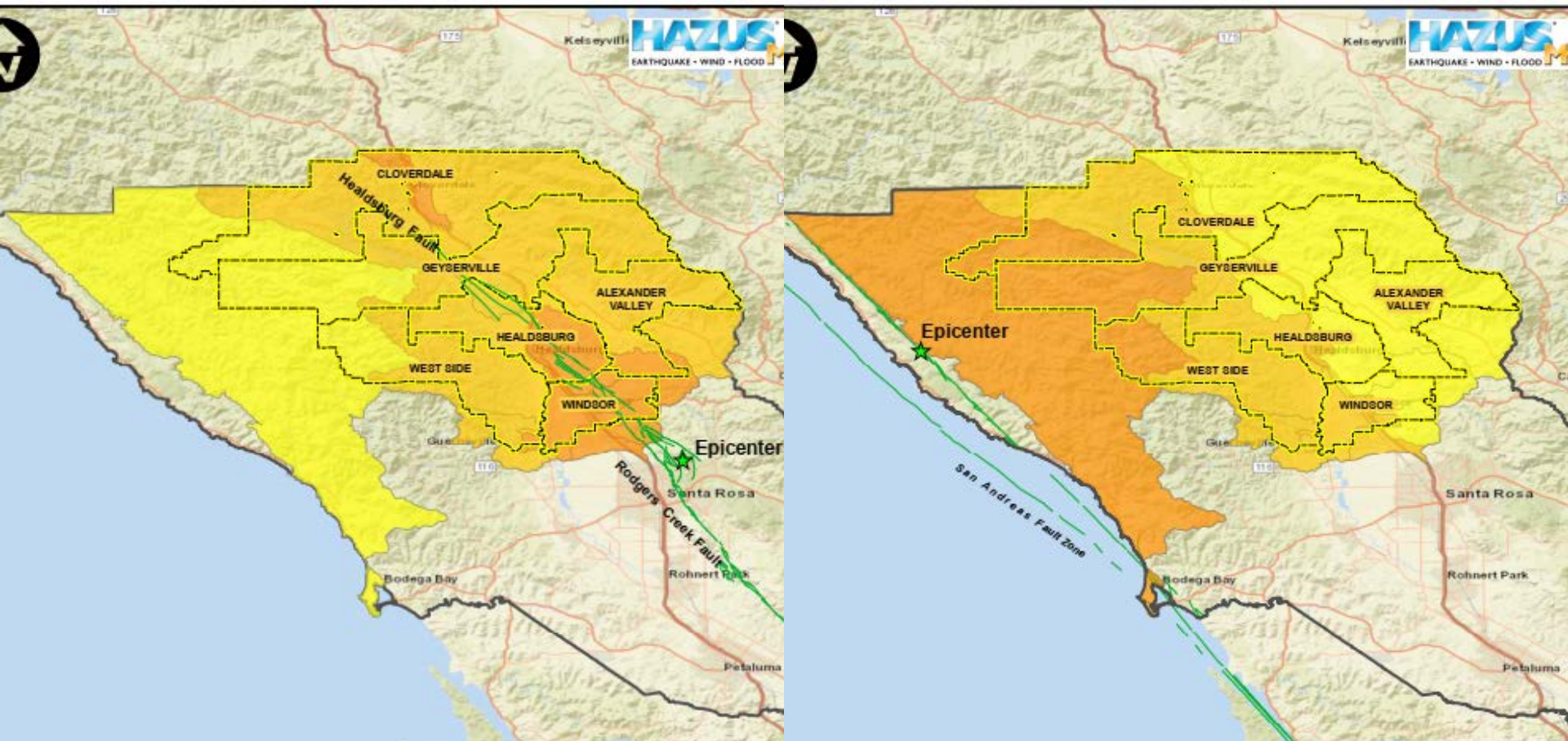


PROJECT AREA HAZARDS

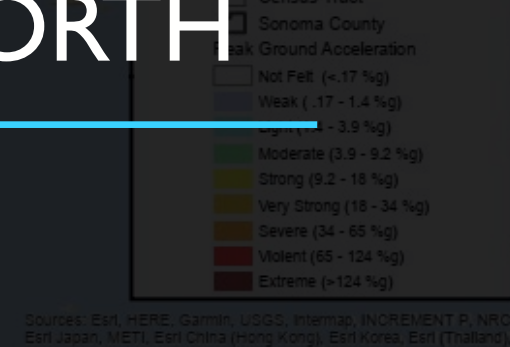
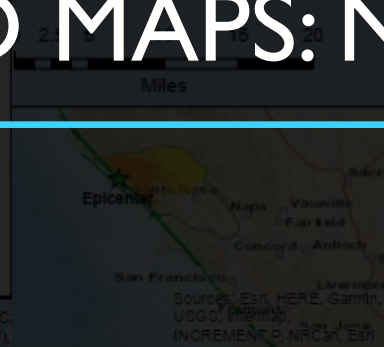
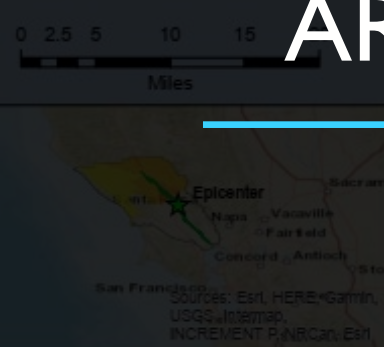
- Earthquake
- Flood
- Landslide
- Wildfire
- Tsunami
- Epidemic/Pandemic/
Vector-Borne
Diseases
- Utility-Related

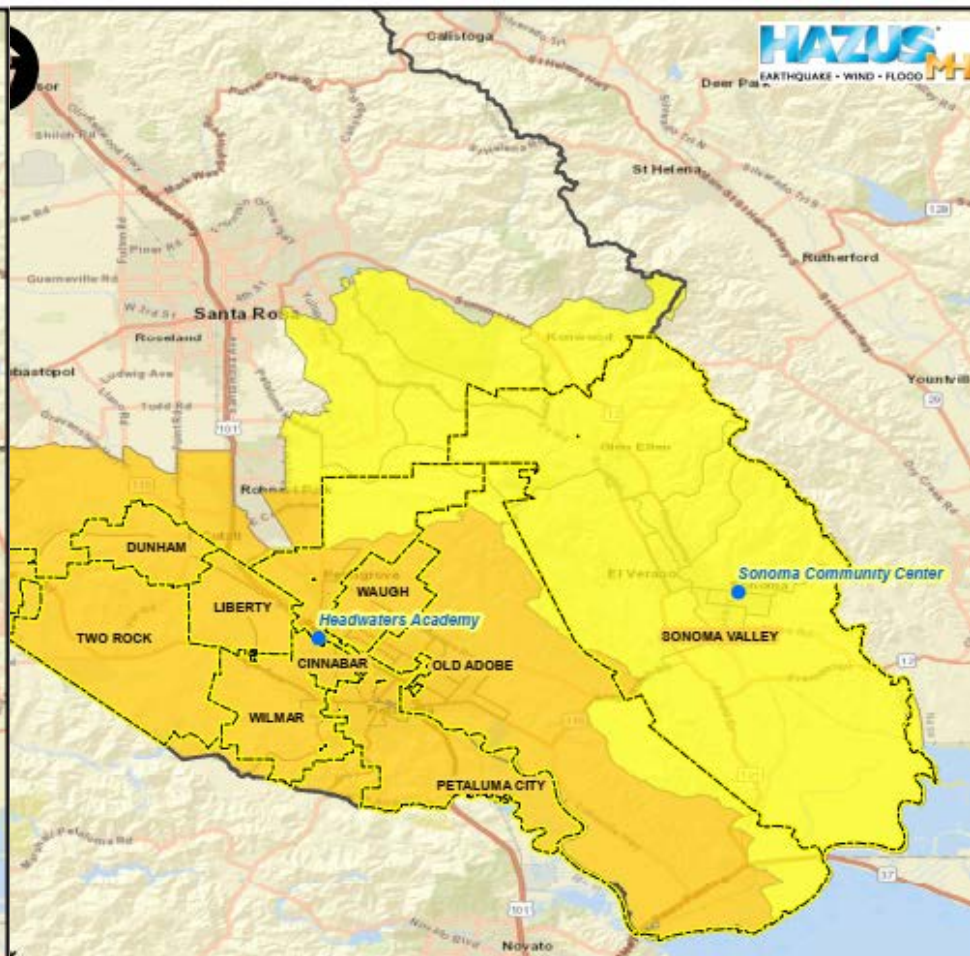
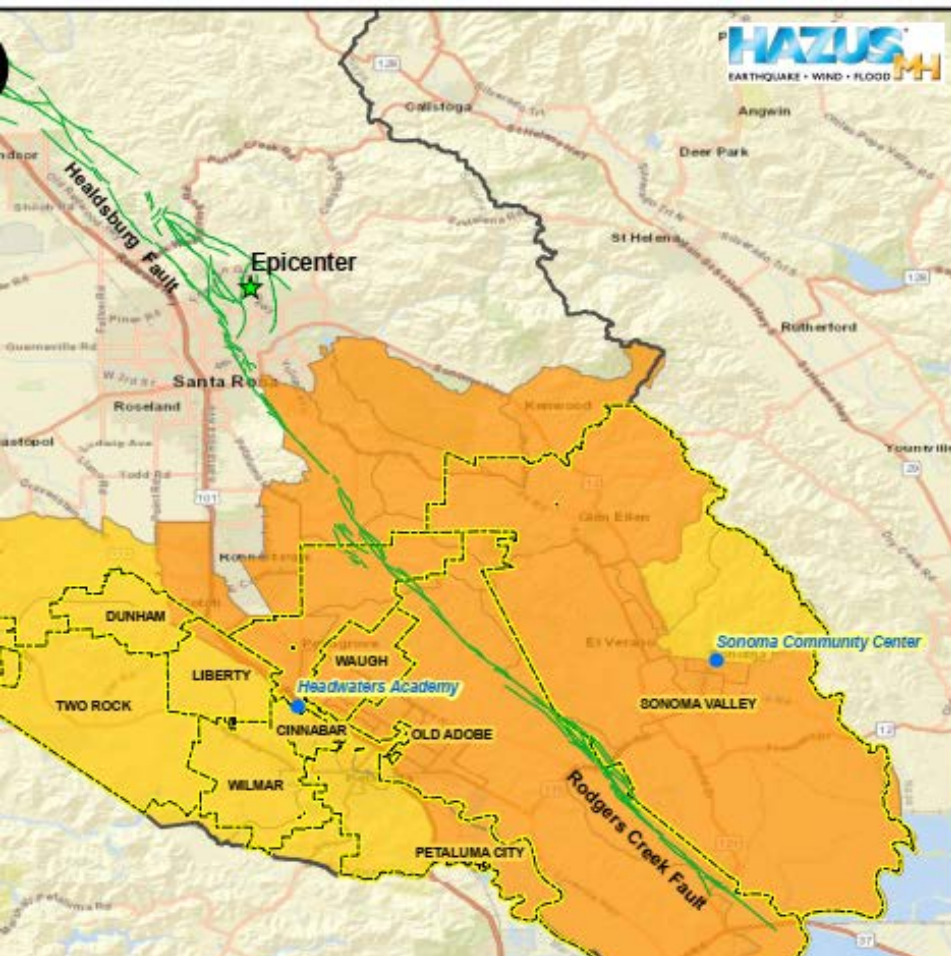


AREA HAZARD MAPS:WEST

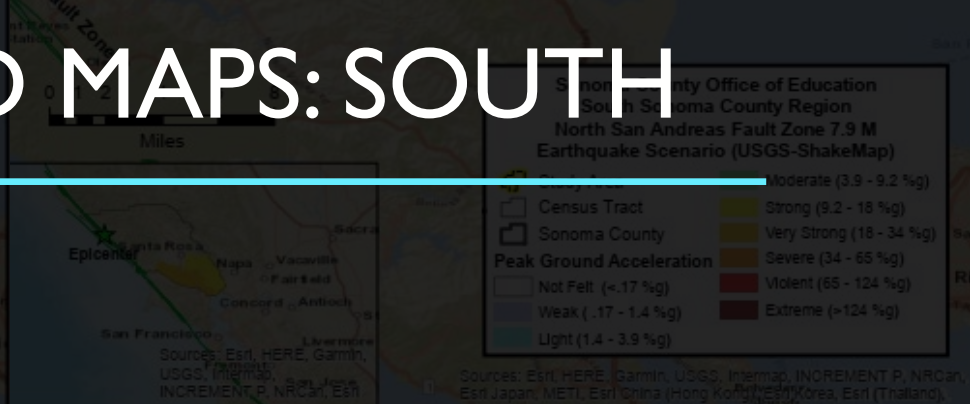
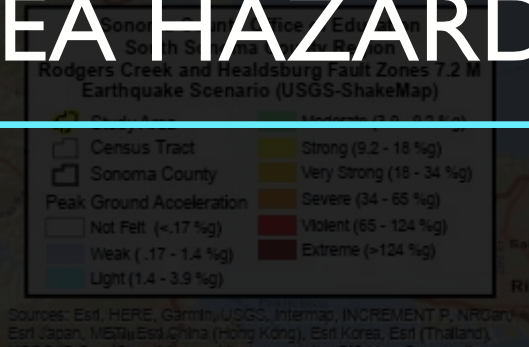
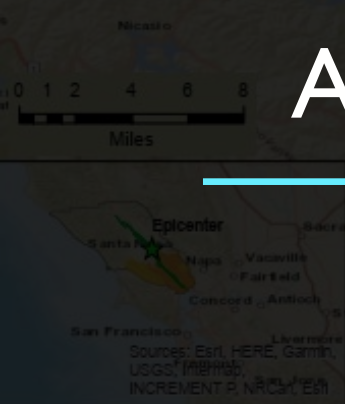


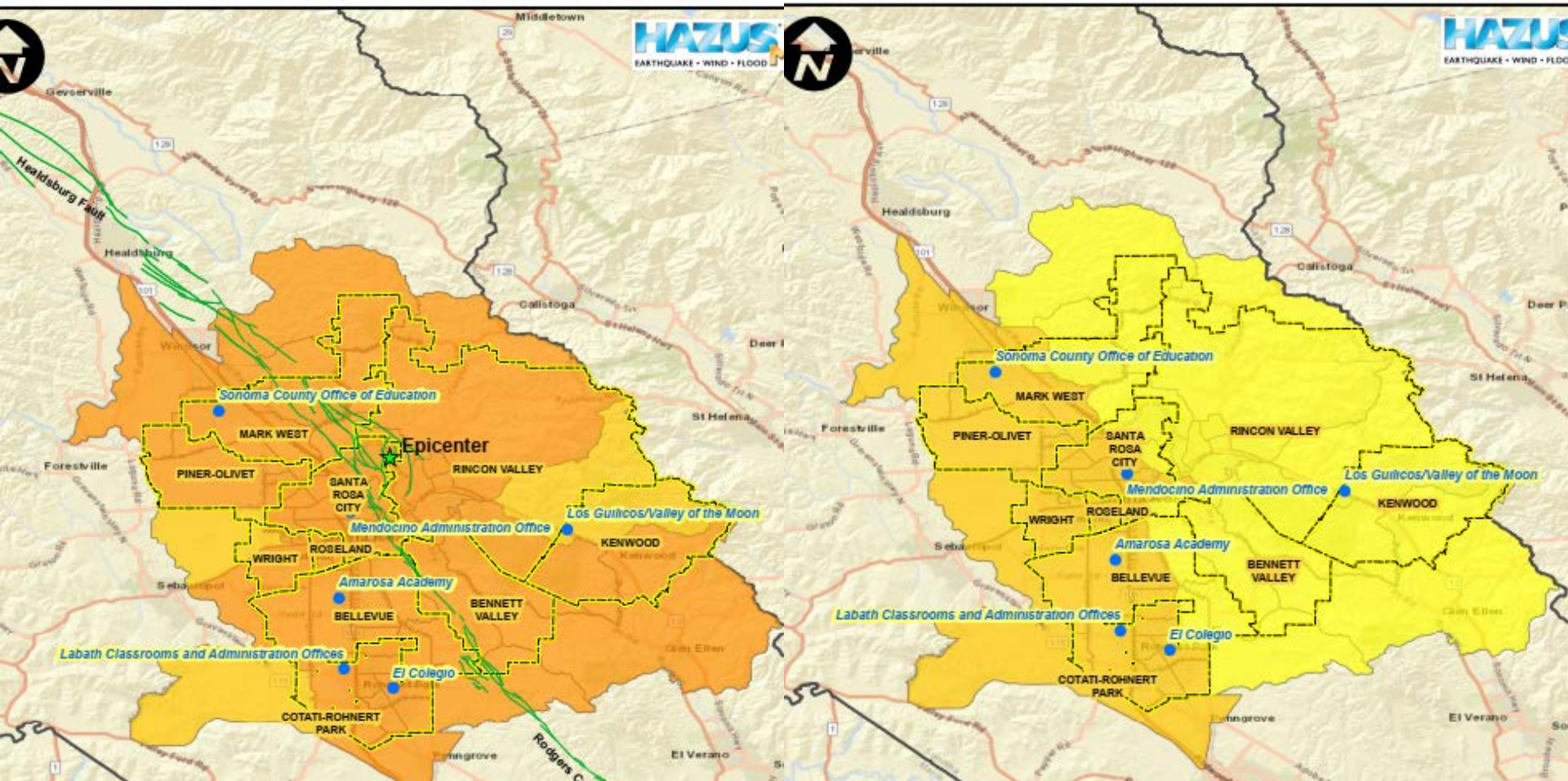
AREA HAZARD MAPS: NORTH



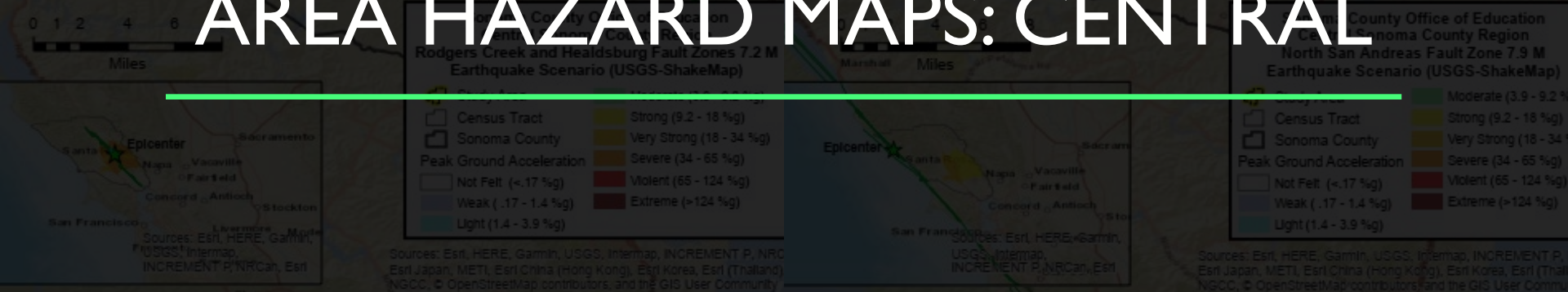


AREA HAZARD MAPS: SOUTH





AREA HAZARD MAPS: CENTRAL



FINALIZATION AND IMPLEMENTATION



Finalization

Cal OES and FEMA Formal Review
FEMA Approval Pending Adoption
Board Resolution to FEMA
FEMA Letter of Approval



Implementation

Planning Team Convenes Biannually

- Review status of Mitigation Actions
- Seek grant funding for Projects and Programs

5-year Update of Plan

RESOLUTION REPORT

Date: 05/11/2023

To: THUSD Board of Trustees

From: Dr. Guzman, Superintendent

Agenda Title: Resolution No. 2023-566 Adopting 2023 Multi-Jurisdictional Hazard Mitigation Plan

Purpose

The Disaster Mitigation Act of 2000 requires communities to develop, implement, and update hazard mitigation plans recognizing potential natural hazards and to identify and consider mitigation measures to reduce the risks associated with those hazards. The plan is a tool to aid in facility and infrastructure planning and improvements. It is also a requirement to qualify for federal hazard mitigation grants. Federal regulations require hazard mitigation plans to be reviewed and approved by FEMA. This Multi-Jurisdictional Hazard Mitigation Plan has received an "Approval Pending Adoption" from FEMA and now must be adopted by the jurisdiction's decision-making body. Staff is seeking the Board's adoption of Resolution No. 2023-566 finalizing the hazard mitigation planning process.

Background/Analysis

The Multi-Jurisdictional Hazard Mitigation Plan (Plan) process began in January 2020 with assistance from Emergency Planning Consultants (EPC) and the Multi-Jurisdictional Hazard Mitigation Executive Planning Team (Planning Team), which consisted of representatives from the Sonoma County Office of Education and all of the School Districts included within. Carolyn Harshman, EPC President, facilitated a total of nearly 50 meetings, developed the 2023 Plan, and led the formal review with California Office of Emergency Services (CalOES) and the Federal Emergency Management Agency (FEMA).

Through the planning process, the Executive Planning Team developed a Mitigation Actions Matrix for each of the participating agencies which identify ongoing, planned, and desired projects and programs. The mitigation action projects and programs are directly tied to the following goals: (1) protect life and property, (2) enhance public awareness, (3) preserve natural systems, (4) encourage partnerships and implementation, and (5) strengthen emergency services. The adoption of the Plan will allow each participating agency to seek mitigation grant funding when the opportunity becomes available including following Presidential Disaster Declarations and annual grant allotments. The Plan will be a living document and will be reviewed by the Executive Planning Team members on a bi-annual basis to ensure the Mitigation Actions Matrix is implemented and funding opportunities are being pursued.

Recommendation

It is recommended that the Board adopt the Multi-Jurisdictional Hazard Mitigation Plan and forward the signed adoption resolution to FEMA for approval.

**RESOLUTION #2023-566
BEFORE THE BOARD OF TRUSTEES OF THE
TWIN HILLS UNION SCHOOL DISTRICT**

**A RESOLUTION ADOPTING THE 2023 MULTI-JURISDICTIONAL
HAZARD MITIGATION PLAN**

05/11/2023

WHEREAS, the project area of Sonoma County is vulnerable to natural hazards which may result in loss of life and property, economic hardship, and threats to public health and safety; and

WHEREAS, Section 322 of the Disaster Mitigation Act of 2000 (DMA 2000) requires state and local governments to develop and submit for approval a mitigation plan that outlines processes for identifying their respective natural hazards, risks, and vulnerabilities; and

WHEREAS, Twin Hills USD acknowledges the requirements of Section 322 of DMA 2000 to prepare the Multi-Jurisdictional Hazard Mitigation Plan (Plan) in order to be eligible for pre- and post-disaster federal hazard mitigation grant funds; and

WHEREAS, the Sonoma County Office of Education acted as the lead for the Executive Planning Team and worked with 38 agencies representatives including opening the planning process to pertinent external stakeholders; and

WHEREAS, a public involvement process consistent with the requirements of DMA 2000 was conducted to develop the Plan; and

WHEREAS, the Plan recommends mitigation activities that will reduce losses to life and property affected by natural hazards that face the Sonoma County Office Education; and

NOW, THEREFORE THE TWIN HILLS UNION SCHOOL DISTRICT, RESOLVES AS FOLLOWS:

SECTION 1. The Board finds that all of the facts set forth in the Recitals of this Resolution are true and correct.

SECTION 2. The Board has reviewed the Plan and based upon the whole record before it, in the exercise of its independent judgment and analysis, approves and adopts the 2023 Multi-Jurisdictional Hazard Mitigation Plan.

The foregoing resolution was duly passed and adopted at a regular meeting of the Board of Trustees of the Twin Hills Union School District on the 11th day of May, 2023, on a motion by trustee _____, seconded by trustee _____ by the following roll call vote:

AYES: _____

NOES: _____

ABSENT/

ABSTAIN: _____

Board Members

Vote

Terry Beck

Melissa Bechtel

Jeff Harding

John Moise

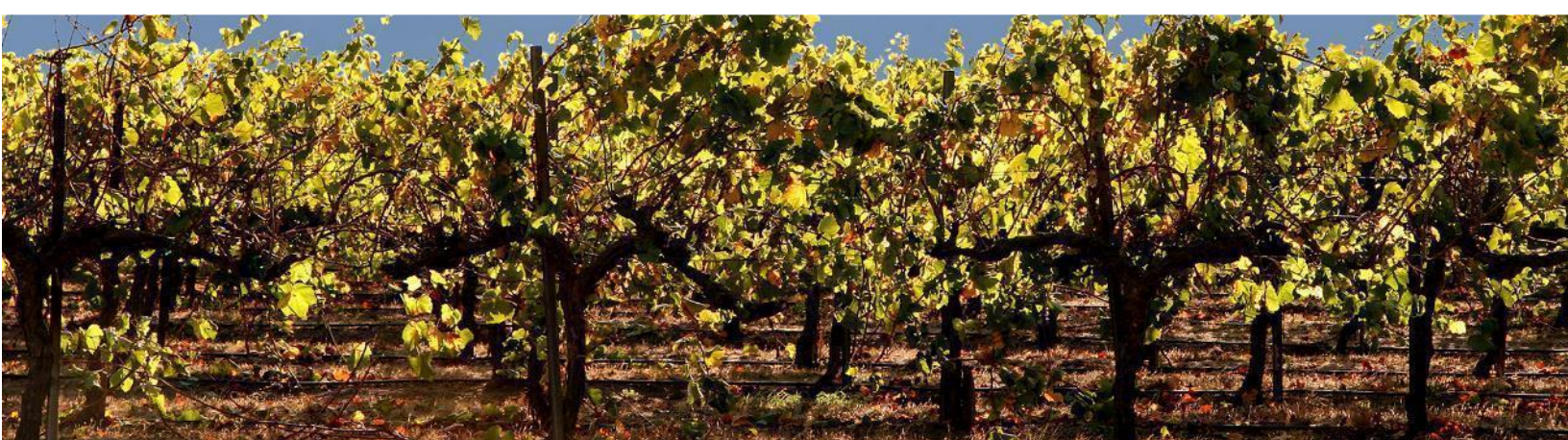
Michael Ost

Dated this 11th day of May, 2023

Clerk/President of the Governing Board

Anna-Maria Guzman, Ed.D., Superintendent

March 20, 2023 | **Multi-Jurisdictional Hazard Mitigation Plan**



Sonoma County
Office of Education

Sonoma County Plan not in printed packet, please find this on the SCOE website:
https://www.scoe.org/files/Sonoma_COE_HMP_1.22.2023.pdf

Credits

Q&A | ELEMENT A: PLANNING PROCESS | A1c.

Q: Does the plan identify who represented each jurisdiction? (At a minimum, it must identify the jurisdiction represented and the person’s position or title and agency within the jurisdiction.)

(Requirement §201.6(c)(1))

A: See **Hazard Mitigation Planning Team** below.

Multi-Jurisdictional Hazard Mitigation Executive Planning Team:

Agency	Name	Title/Position
Alexander Valley Union	Matt Reno	Superintendent-Principal
Bellevue Union	Roger Ferrell	Director of Maintenance and Operations
Bennett Valley Union	Sue Field	Superintendent
Cinnabar	Angel Judy	CBO
Cloverdale Unified	Rick Scaramella	Director of MOT
Cotati-Rohnert Park Unified	Josh Savage	Executive Director of Facilities, Maintenance and Operations
Dunham	Daniel Hoffman	Superintendent
Forestville Union	Renee Semik	Superintendent
Fort Ross	John Markatos	Superintendent (former)
Fort Ross	Jennifer Dudley	Superintendent
Geyserville Unified	Deborah Bertolucci	Superintendent
Gravenstein Union	Wanda Holden	CBO
Guerneville	Dana Pedersen	Superintendent
Harmony Union	Matthew Morgan	Superintendent-Principal
Healdsburg Unified	Robert Smith	Maintenance and Operations Supervisor
Horicon	Jeff McFarland	Superintendent-Principal
Kashia	Patti Pomplin	CBO
Kenwood	Bob Bales	Superintendent-Principal
Liberty	Christopher Rafanelli	Superintendent
Mark West Union	Regina Cuculich	Associate Superintendent of Business
Monte Rio Union	Nathan Myers	Superintendent
Montgomery	Taryn Parmeter	District Secretary
Oak Grove	Amber Stringfellow	Superintendent
Old Adobe Union	Lynda Williams	CBO
Petaluma City Schools	Chris Thomas	Chief Business Official
Piner-Olivet Union	Felicia Koha	Chief Business Official
RESIG (non-participant)	Christine Dektor	Loss Prevention
Rincon Valley Union	Mike Moniot	M&O Supervisor

Roseland	Amy Jones-Kerr	Superintendent (former)
Roseland	Gail Ahlas	Superintendent (former)
Santa Rosa City Schools	Erik Oden	Director of Maintenance and Operations
SCOE	Mark Silva	Director of Facilities
SCOE	Mary Downey	Deputy Superintendent, Business Services (former)
SCOE	Bonnie Brown	Department Administrative Specialist
Sebastopol Union	Brent Ono	Facilities Supervisor
Sonoma Valley Unified	Doug Weidemann	Manager of Maintenance and Operations
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Two Rock Union	Michelle Panizzera	Chief Business Official
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West Sonoma County Union High	Jennie Bruneman	Director of Facilities
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Mapping

The maps in this plan were provided by the Sonoma County Office of Education (SCOE), other participating school districts, County of Sonoma, Federal Emergency Management Agency (FEMA), California Office of Emergency Services (Cal OES) or were acquired from public Internet sources. Care was taken in the creation of the maps contained in this plan, however they are provided "as is". The Project Area jurisdictions cannot accept any responsibility for any errors, omissions or positional accuracy, and therefore, there are no warranties that accompany these products (the maps). Although information from land surveys may have been used in the creation of these products, in no way does this product represent or constitute a land survey. Users are cautioned to field verify information on this product before making any decisions.

Mandated Content

In an effort to assist the readers and reviewers of this document, the jurisdiction has inserted "markers" emphasizing mandated content as identified in the Disaster Mitigation Act of 2000 (Public Law – 390). Following is a sample marker:

EXAMPLE

Q&A | ELEMENT A: PLANNING PROCESS | A1a.

Q Does the plan document the planning process, including how it was prepared (with a narrative description, meeting minutes, sign-in sheets, or another method)? (Requirement §201.6(c)(1))

A:

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Part I: PLANNING PROCESS

Introduction

Q&A | ELEMENT A: PLANNING PROCESS | A1b.

Q: Does the plan list the jurisdiction(s) participating in the plan that are seeking approval? (Requirement §201.6(c)(1))

A: See **Introduction** below.

The Hazard Mitigation Plan (Mitigation Plan) was prepared in response to the Disaster Mitigation Act of 2000 (DMA 2000). DMA 2000 (also known as Public Law 106-390) since 2005 has required state and local governments (including special districts and joint powers authorities) to prepare mitigation plans to document their mitigation planning process, and identify hazards, potential losses, mitigation needs, goals, and strategies. This type of planning supplements the Project Area's emergency management planning programs. The Project Area includes the following 39 planning entities identified by "planning area":

Planning Area North: Cloverdale, Geyserville, Healdsburg, West Side, Alexander Valley, Windsor

Planning Area West: Horicon, Kashia, Montgomery, Guerneville, Monte Rio, Harmony, Twin Hills, Sebastopol, Gravenstein, West Sonoma County Unified High School District, Fort Ross, Forestville, Oak Grove

Planning Area Central: Santa Rosa City Schools, Piner-Olivet, Mark West, Bellevue, Wright, Roseland, Cotati-RP, Bennett Valley, Rincon Valley, Kenwood

Planning Area South: Petaluma, Sonoma Valley, Old Adobe, Cinnabar, Two Rock, Liberty, Dunham, Waugh, Wilmar, Sonoma County Office of Education

This is the first hazard mitigation plan for all the participating jurisdictions within the Project Area.

DMA 2000 was designed to establish a national program for pre-disaster mitigation, streamline disaster relief at the federal and state levels, and control federal disaster assistance costs. Congress believed these requirements would produce the following benefits:

- ✓ Reduce loss of life and property, human suffering, economic disruption, and disaster costs.
- ✓ Prioritize hazard mitigation at the local level with increased emphasis on planning and public involvement, assessing risks, implementing loss reduction measures, and ensuring critical facilities/services survive a disaster.
- ✓ Promote education and economic incentives to form community-based partnerships and leverage non-federal resources to commit to and implement long-term hazard mitigation activities.

The following FEMA definitions are used throughout this plan (Source: FEMA, 2002, *Getting Started, Building Support for Mitigation Planning*, FEMA 386-1):

Hazard Mitigation – “Any sustained action taken to reduce or eliminate the long-term risk to human life and property from hazards”.

Planning – “The act or process of making or carrying out plans; specifically, the establishment of goals, policies, and procedures for a social or economic unit.”

Planning Approach

The four-step planning approach outlined in the FEMA publication, *Developing the Mitigation Plan: Identifying Mitigation Actions and Implementing Strategies* (FEMA 386-3) was used to develop this plan:

- ✓ **Develop mitigation goals and objectives** - The risk assessment (hazard characteristics, inventory, and findings), along with municipal policy documents, were utilized to develop mitigation goals and objectives.
- ✓ **Identify and prioritize mitigation actions** - Based on the risk assessment, goals and objectives, existing literature/resources, and input from participating entities, mitigation activities were identified for each hazard.
- ✓ **Prepare implementation strategy** - Generally, high priority activities are recommended for implementation first. However, based on organizational needs and goals, project costs, and available funding, some medium or low priority activities may be implemented before some high priority items.
- ✓ **Document mitigation planning process** - The mitigation planning process is documented throughout this plan.

Q&A | ELEMENT A: PLANNING PROCESS | A3

Q: Does the plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))

A: See **Stakeholders** below.

Stakeholders

A Multi-Jurisdictional Executive Planning Team (Executive Planning Team) supported by SCOE staff and represented by the 39 participating agencies (SCOE and 38 districts), worked with Emergency Planning Consultants to create the Multi-Jurisdictional Hazard Mitigation Plan (MJHMP). **The Executive Planning Team served as the primary stakeholders throughout the planning process.**

As required by DMA 2000, the Executive Planning Team shared the MJHMP with their respective communities during the plan writing phase. The general public and external agencies were invited to contribute to the mitigation plan during the plan writing phase. The Second Draft Plan was announced and posted on the SCOE website on August 21, 2021. External agencies were emailed on the same day with information about accessing the Second Draft Plan on the SCOE website and instructions for inviting parents and staff to contribute to the plan. In order to avoid multiple invitations, SCOE staff took the lead on informing external agencies via email with an invitation to provide input.

The general public and external agencies served as secondary stakeholders with opportunities to contribute to the plan during the Plan Writing Phase of the planning process.

Q&A | ELEMENT C. MITIGATION STRATEGY | C2

Q: Does the plan address each jurisdiction’s participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))

A: See **NFIP Participation** below.

National Flood Insurance Program

Established in 1968, the NFIP provides federally backed flood insurance to homeowners, renters, and businesses in communities that adopt and enforce floodplain management ordinances to reduce future flood damage. None of the participating jurisdictions have control over land use so has no floodplain management ordinance or a floodplain administrator. Furthermore, the Project Area and its facilities rely on infrastructure (roads, bridges, etc.) throughout an expansive area included in many Flood Insurance Rate Maps (FIRM) that show floodways, 100-year flood zones, and 500-year flood zones.

NFIP Participation

Special districts are not allowed to participate in NFIP.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B4

Q: Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii))

A: See **Repetitive Loss Properties** below.

Repetitive Loss Properties

According to the Sonoma County Hazard Multijurisdictional Mitigation Plan (2021), the County has the highest number of repetitive flood loss properties in the State of California; the cost of which is higher than the next nine highest repetitive loss communities combined. Repetitive flood loss properties comprise only one percent of the flood insured properties but account for 25 to 30 percent of all claims paid by the National Flood Insurance Program (NFIP). The community with the largest number of repetitive loss properties is Guerneville, followed by Monte Rio and Forestville.

Repetitive Loss Properties (RLPs) are most susceptible to flood damages; therefore, they have been the focus of flood hazard mitigation programs. A repetitive loss property is one for which two or more claims of \$1,000 or more have been paid by the National Flood Insurance Program (NFIP) within any given ten-year period. According to FEMA resources, none of the Project Area facilities are designated as a Repetitive Loss Property (RLPs).

None of the repetitive loss properties are owned or leased by the MJHMP participating agencies.

Planning Process

The Executive Planning Team consisted of one representative from each of the participating agencies along with 3 representatives from SCOE. They met at the beginning of the project for a Kick-Off Meeting which also included a customized delivery of FEMA’s Independent Study 318 – Mitigation Planning for Local and Tribal Communities. The course was customized and delivered by Emergency Planning Consultants. The second meeting of the Executive Planning Team was at the conclusion of the project to review and contribute to the First Draft Plan. In addition to the Executive Planning Team, four Area Planning Teams were created based on commonalities of hazards and geography. The Area Planning Teams included North, West, Central, and South and they met once for a project overview and hazard briefing. Following the Area meeting, each individual jurisdiction met one-on-one with Emergency Planning Consultants to begin work on a Mitigation Actions Matrix.

Throughout the project, the Executive Planning Team served as the primary stakeholder while also making a concerted effort to gather information from the Area Planning Teams, general public, external agencies (cities and county served, utility providers, and other special districts). In addition, the Executive Planning Team solicited information from agencies and people with specific knowledge of hazards and past historical events, as well as building codes and facilities maintenance planning. The hazard mitigation strategies contained in this plan were developed through an extensive planning process involving the Planning Team with input gathered from the Area Planning Teams, general public, and external agencies.

Following review and input by the Executive Planning Team to the First Draft Plan, next (still during the Plan Writing Phase), the Second Draft Plan was shared with the Area Planning Teams, general public and external agencies. The Area Planning Team, general public and external agencies served as the secondary stakeholders. Next, the comments gathered from the secondary stakeholders were incorporated into a Third Draft Plan which was submitted to Cal OES. Following the Cal OES review, revisions were incorporated into a Fourth Draft Plan which was once again shared with the external agencies and general public.

Next, the Executive Planning Team completed amendments to the Plan to reflect mandated input by Cal OES and FEMA. The Final Draft Plan was then posted in advance of decision maker hearings by SCOE’s Board of Education as well as each of the 40 participating school districts. Any comments gathered were included in the staff report to the various Boards of Education. Following adoption by each of the Boards, proof of adoption was forwarded to FEMA with a request for approval. A singular FEMA Letter of Approval was included in the Final Plan. The planning process described above is portrayed below in a progression:

Q&A ELEMENT A: PLANNING PROCESS A1a.
Q: Does the plan document the planning process, including how it was prepared (with a narrative description, meeting minutes, sign-in sheets, or another method)? (Requirement §201.6(c)(1))
A: See Plan Methodology and Planning Phases Progression below.
Q&A ELEMENT A: PLANNING PROCESS A3
Q: Does the plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))
A: See Planning Phases Progression below.

Table: Planning Phases Progression

PLANNING PHASES PROGRESSION				
Plan Writing Phase (First & Second Draft Plan)	Plan Review Phase (Third and Fourth Draft Plan)	Plan Adoption Phase (Final Draft Plan)	Plan Approval Phase (Final Plan)	Plan Implementation Phase
<ul style="list-style-type: none"> Executive Planning Team input – research, meetings, writing, review of First Draft Plan Incorporate input into Second Draft Plan Invite general public and external agencies to provide input to the Second Draft Plan Incorporate input into the Third Draft Plan 	<ul style="list-style-type: none"> Third and Fourth Draft Plan sent to Cal OES and FEMA for review Address any mandated revisions identified by Cal OES Fourth Draft Plan distributed to external agencies and general public FEMA issues approval pending adoption 	<ul style="list-style-type: none"> Post public notice of Board of Education meetings along with the Final Draft Plan Final Draft Plan distributed to Boards in advance of meeting Present Final Draft Plan to the Boards of Education for adoption Boards of Education adopt Plan 	<ul style="list-style-type: none"> Submit Proof of Adoptions to FEMA with request for final approval Receive FEMA Letter of Approval Incorporate FEMA approval and Board of Education resolutions into the Final Plan 	<ul style="list-style-type: none"> Conduct semi-annual Executive Planning Team meetings which will be integrated into an existing standing meeting Integrate mitigation action items into budget and other funding and strategic documents


Q&A | ELEMENT E: PLAN ADOPTION | E1

Q: Does the plan include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval? (Requirement §201.6(c)(5))

A: See **Plan Adoption Process** below.

Plan Adoption Process

Adoption of the plan by the local governing body demonstrates the jurisdictions within the Project Area's commitment to meeting mitigation goals and objectives. Governing body approval legitimizes the plan and authorizes responsible agencies to execute their responsibilities.

The Third Draft Plan was submitted to Cal OES and FEMA for review and approval. Following the review by Cal OES and related revisions, the Fourth Draft Plan was once again made available to external agencies and the general public.

FEMA issued an Approval Pending Adoption on [REDACTED] requiring the adoption of the Plan by the Boards of Education. The adoption resolutions were submitted to FEMA along with a request for a FEMA Letter of Approval.

In preparation for the public meeting with the Boards of Education, the Planning Team prepared a staff report including an overview of the Planning Process, Risk Assessment, Mitigation Goals, and Mitigation Actions. The staff presentation concluded with a summary of the input received

during the public review of the document. The meeting participants were encouraged to present their views and make suggestions on possible mitigation actions. Any input gathered was added to the Final Plan.

Each of the thirty-nine Boards of Education heard the item on (insert table with names and dates). The Boards voted to adopt the hazard mitigation plan. The Resolutions of adoption are in the Attachments.

Plan Approval

FEMA issued an Approval Pending Adoption notice on [redacted]. Upon adoption by the Boards of Education, the resolutions were forwarded to FEMA. The FEMA Letter of Approval was issued on [redacted]. A copy of the FEMA Letter of Approval is in the Attachments.

Plan Methodology

The Planning Team discussed knowledge of hazards and past historical events, as well as facilities maintenance plans.

The rest of this section describes the mitigation planning process including 1) Executive Planning Team involvement, 2) Area Planning Team, general public and external agency involvement; and 3) integration of existing data and plans.

Q&A | ELEMENT A: PLANNING PROCESS | A1a.

Q: Does the plan document the planning process, including how it was prepared (with a narrative description, meeting minutes, sign-in sheets, or another method)? (Requirement §201.6(c)(1))

A: See **Executive Planning Team Involvement** below.

Executive Planning Team Involvement

The Executive Planning Team served as the primary stakeholder throughout the planning process. The Area Planning Teams, general public, and external agencies served as secondary stakeholders in the planning process. The Executive Planning Team was responsible for the following tasks:

- ✓ Confirming planning goals,
- ✓ Prepare timeline for plan,
- ✓ Ensure plan meets DMA 2000 requirements,
- ✓ Organize and solicit involvement of public and external agencies,
- ✓ Analyze existing data and reports,
- ✓ Review hazard information,
- ✓ Review HAZUS loss projection estimates,
- ✓ Create Mitigation Action Items,
- ✓ Participate in Planning Team meetings and Board of Education public meeting, and
- ✓ Provide existing resources including maps and data.

The Executive Planning Team, with assistance from Emergency Planning Consultants, identified and profiled hazards; determined hazard rankings; estimated potential exposure or losses; evaluated development trends and specific risks; and developed mitigation goals and action items.

Table: Level of Participation at Executive Planning Team, Area Planning Team, and Entity Level Meetings

Agency and Name of Attendee	Research and Writing of Plan	Executive Planning Team Kick-Off Meeting: February 11 or 12, 2020	Area Planning Team Meeting: April 27 or 28, 2020	One on One Meeting with Individual Planning Entity (May 2020)	Executive Planning Team Meeting to Review and Contribute to First Draft Plan (February 11 or 25, 2021)	Distribute Second Draft Plan to General Public and External Agencies	Review Input From Public, and External Agencies of the Second Draft Plan	Submit Third Draft Plan to Cal OES/FEMA for Approval Pending Adoption	Submit Fourth Draft Plan to External Agencies and General Public	Post Final Draft Plan in Advance of Board of Education Meetings	Present Final Draft Plan to Boards of Education at Public Meeting for Plan Adoption	Submit Proof of Adoptions to FEMA for Final Approval	Incorporate FEMA Approval into Final Plan
Alexander Valley Union School District													
Matt Reno		X		X	X	X	X						
Bellevue Union School District													
Roger Farrell		X	X	X	X	X	X						
Bennett Valley Union School District													
Jimmy Hughes					X	X	X						
Sue Field		X	X	X									
Cinnabar School District													
Angel Judy		X	X	X	X	X	X						
Kristine Arcuri					X								
Cloverdale Unified School District													
Rick Scaramella			X	X	X	X	X						
Cotati-Rohnert Park Unified School District													
Josh Savage		X	X	X	X	X	X						
Dunham School District													

Agency and Name of Attendee	Research and Writing of Plan	Executive Planning Team Kick-Off Meeting: February 11 or 12, 2020	Area Planning Team Meeting: April 27 or 28, 2020	One on One Meeting with Individual Planning Entity (May 2020)	Executive Planning Team Meeting to Review and Contribute to First Draft Plan (February 11 or 25, 2021)	Distribute Second Draft Plan to General Public and External Agencies	Review Input From Public, and External Agencies of the Second Draft Plan	Submit Third Draft Plan to Cal OES/FEMA for Approval Pending Adoption	Submit Fourth Draft Plan to External Agencies and General Public	Post Final Draft Plan in Advance of Board of Education Meetings	Present Final Draft Plan to Boards of Education at Public Meeting for Plan Adoption	Submit Proof of Adoptions to FEMA for Final Approval	Incorporate FEMA Approval into Final Plan
Daniel Hoffman		X	X	X									
Maggie Vasquez					X	X	X						
Forestville Union School District													
Renee Semik		X	X	X	X	X	X						
Fort Ross Elementary School District													
John Markatos				X									
Jennifer Dudley					X	X	X						
Geyserville Unified School District													
Deborah Bertolucci		X	X	X									
Christina Menicucci					X	X	X						
Gravenstein Union School District													
Wanda Holden		X	X	X	X	X	X						
Guerneville Elementary School District													
Cherie Cahn					X	X	X						
Dana Pedersen			X	X									
Harmony Unified School District													
Matthew Morgan		X	X	X	X	X	X						
Healdsburg Unified School District													
Robert Smith		X	X	X	X	X	X						
Horicon Elementary School District													

Agency and Name of Attendee	Research and Writing of Plan	Executive Planning Team Kick-Off Meeting: February 11 or 12, 2020	Area Planning Team Meeting: April 27 or 28, 2020	One on One Meeting with Individual Planning Entity (May 2020)	Executive Planning Team Meeting to Review and Contribute to First Draft Plan (February 11 or 25, 2021)	Distribute Second Draft Plan to General Public and External Agencies	Review Input From Public, and External Agencies of the Second Draft Plan	Submit Third Draft Plan to Cal OES/FEMA for Approval Pending Adoption	Submit Fourth Draft Plan to External Agencies and General Public	Post Final Draft Plan in Advance of Board of Education Meetings	Present Final Draft Plan to Boards of Education at Public Meeting for Plan Adoption	Submit Proof of Adoptions to FEMA for Final Approval	Incorporate FEMA Approval into Final Plan
Jeff McFarland		X	X	X		X	X						
Kashia School District													
Patti Pomplin		X	X	X	X	X	X						
Kenwood School District													
Bob Bales		X	X	X	X	X	X						
Liberty School District													
Christopher Rafanelli		X	X	X	X	X	X						
Mark West Union School District													
Regina Cuculich		X		X		X	X						
Monte Rio Union School District													
Nathan Myers		X	X	X	X	X	X						
Montgomery Elementary School District													
Taryn Parmeter		X	X	X									
Laurie Mason					X	X	X						
Oak Grove School District													
Amber Stringfellow		X	X	X	X	X	X						
Old Adobe Union School District													
Lynda Williams		X	X	X	X	X	X						
Petaluma City Schools													
Chris Thomas		X	X	X	X	X	X						

Agency and Name of Attendee	Research and Writing of Plan	Executive Planning Team Kick-Off Meeting: February 11 or 12, 2020	Area Planning Team Meeting: April 27 or 28, 2020	One on One Meeting with Individual Planning Entity (May 2020)	Executive Planning Team Meeting to Review and Contribute to First Draft Plan (February 11 or 25, 2021)	Distribute Second Draft Plan to General Public and External Agencies	Review Input From Public, and External Agencies of the Second Draft Plan	Submit Third Draft Plan to Cal OES/FEMA for Approval Pending Adoption	Submit Fourth Draft Plan to External Agencies and General Public	Post Final Draft Plan in Advance of Board of Education Meetings	Present Final Draft Plan to Boards of Education at Public Meeting for Plan Adoption	Submit Proof of Adoptions to FEMA for Final Approval	Incorporate FEMA Approval into Final Plan
Gary Callahan					X								
Piner-Olivet Union School District													
Felicia Koha		X	X	X	X	X	X						
RESIG (not a participant agency)													
Christine Dektor		X	X										
Erin Tarkhanian		X											
Rincon Valley School District													
Daniel Hebel		X	X	X									
Mike Moniot					X	X	X						
Roseland Public Schools													
Amy Jones-Kerr		X	X	X									
Gail Ahlas					X	X	X						
Santa Rosa City Schools													
Rick Edson		X	X	X	X	X	X						
Erik Oden				X	X								
Sebastopol School District													
Brent Ono		X	X	X	X	X	X						
Sonoma County Office of Education													
Bonnie Brown		X	X	X	X	X	X			X			
Mary Downey		X	X	X	X	X	X						
Mark Silva		X	X	X	X								

Agency and Name of Attendee	Research and Writing of Plan	Executive Planning Team Kick-Off Meeting: February 11 or 12, 2020	Area Planning Team Meeting: April 27 or 28, 2020	One on One Meeting with Individual Planning Entity (May 2020)	Executive Planning Team Meeting to Review and Contribute to First Draft Plan (February 11 or 25, 2021)	Distribute Second Draft Plan to General Public and External Agencies	Review Input From Public, and External Agencies of the Second Draft Plan	Submit Third Draft Plan to Cal OES/FEMA for Approval Pending Adoption	Submit Fourth Draft Plan to External Agencies and General Public	Post Final Draft Plan in Advance of Board of Education Meetings	Present Final Draft Plan to Boards of Education at Public Meeting for Plan Adoption	Submit Proof of Adoptions to FEMA for Final Approval	Incorporate FEMA Approval into Final Plan
Sonoma Valley Unified School District													
David Sandoval		X	X	X									
Doug Weidemann					X	X	X						
Twin Hills Union School District													
Barbara Bickford		X	X	X	X	X	X						
Patty Nosecchi					X								
Two Rock Union School District													
Betha MacClain		X	X	X									
Michelle Panizzera					X	X	X						
Waugh School District													
Sharon Battaglia					X	X	X						
Mike Gardner				X	X								
West Side Union School District													
Kris Menlove		X	X	X									
Mark Zastrow					X	X	X						
West Sonoma County Union High School District													
Jennie Bruneman			X	X	X	X	X						
Denise Fisher					X								
Wilmar Union School District													
Sheila Garvey		X	X	X	X	X	X						

Agency and Name of Attendee	Research and Writing of Plan	Executive Planning Team Kick-Off Meeting: February 11 or 12, 2020	Area Planning Team Meeting: April 27 or 28, 2020	One on One Meeting with Individual Planning Entity (May 2020)	Executive Planning Team Meeting to Review and Contribute to First Draft Plan (February 11 or 25, 2021)	Distribute Second Draft Plan to General Public and External Agencies	Review Input From Public, and External Agencies of the Second Draft Plan	Submit Third Draft Plan to Cal OES/FEMA for Approval Pending Adoption	Submit Fourth Draft Plan to External Agencies and General Public	Post Final Draft Plan in Advance of Board of Education Meetings	Present Final Draft Plan to Boards of Education at Public Meeting for Plan Adoption	Submit Proof of Adoptions to FEMA for Final Approval	Incorporate FEMA Approval into Final Plan
Windsor Unified School District													
Chris Canelake		X											
Lois Standing			X	X	X	X	X						
Wright Elementary School District													
Bill Jereb		X			X	X	X						
EMERGENCY PLANNING CONSULTANTS													
Carolyn Harshman	X	X	X	X	X		X	X					
Don Silverek	X	X	X										

Table: Executive Planning Team and Area Planning Team Timeline

Tasks	December 2019	January 2020	February	March	April	May	June-December	January 2021	February	March-May	April	May	June	July-December	January 2022	February-March	April	September-May	June	July-December	January 2023	February	March	April
Hazard Research, HAZUS-MH, Plan Writing, and Locational Maps																								
Research for Risk and Vulnerability Assessment	X	X																						
HAZUS-MH Maps and Reports for each Area (3 hazard-specific scenarios for each of the 4 Planning Areas)	X	X	X	X																				
Executive Planning Team Meetings																								
Meeting #1 – Project Kickoff, Initial Hazard Briefing, Community Outreach Strategy, Hazard Mitigation Course (2 offerings)			X																					
Meeting #2 – Review First Draft Plan									X															
Area Planning Team Meetings (4 Areas)																								
Area Meetings #1 – Project Timeline, Mitigation Concepts, Review Hazard Research and HAZUS-MH (4 meetings total)					X																			
Area Meetings #2 – Individual Meetings with Participating Jurisdictions (41 meetings total)						X																		
Community Outreach																								
Develop Opportunities for External Agencies and General Public to Provide Input to the Third Draft Plan													X	X	X	X								
Distribute Fourth Draft Plan to External Agencies and General Public																				X				
Formal Review, Approval, and Adoption of Plan																								
Submit Third Draft Plan to Cal OES																	X							
Work with Cal OES and FEMA on DMA 2000-Mandated Revisions to the Plan																		X	X	X	X	X	X	
Receive FEMA Approval Pending Adoption																								
Present to SCOE Board of Education to Adopt the Final Draft Plan																								
Present to District Boards of Education to Adopt the Final Draft Plan																								
Submit Proof of Adoptions to FEMA																								
Receive FEMA Letter of Approval																								
Incorporate FEMA Letter of Approval and Adoption Documentation into Final Plan																								

Q&A | ELEMENT A: PLANNING PROCESS | A2a.

Q: Does the plan document an opportunity for neighboring communities, local, and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development, as well as other interested parties to be involved in the planning process? (Requirement §201.6(b)(2))

A: See **Secondary Stakeholder Involvement** below.

Q&A | ELEMENT A: PLANNING PROCESS | A2b.

Q: Does the plan identify how the stakeholders were invited to participate in the process? (Requirement §201.6(b)(2))

A: See **Secondary Stakeholder Involvement** below.

Secondary Stakeholder Involvement

In addition to the Planning Team, the secondary stakeholders also provided information, expertise, and other resources during the plan writing phase. The secondary stakeholders included the jurisdictional staff, general public and external agencies. All gathered input was incorporated into the Third Draft Plan prior to distribution to Cal OES and FEMA. Following review by Cal OES, a Fourth Draft Plan was distributed to the general Public and external agencies. For a specific accounting of the date, source, information gathered, and use of information during the Plan Writing Phase, please see the **Attachments**.

In advance of the Board of Education public meetings, the same stakeholders were informed of the availability of the Final Draft Plan and encouraged to participate in the public meeting. Any comments gathered were noted in the Planning Team Staff Report and added to the Final Plan.

Q&A | ELEMENT C. MITIGATION STRATEGY | C1a.

Q: Does the plan document each jurisdiction’s existing authorities, policies, programs and resources? (Requirement §201.6(c)(3))

A: See **Capability Assessment – Existing Processes and Programs** below.

Capability Assessment – Existing Processes and Programs

The districts and SCOE will incorporate mitigation planning as an integral component of daily operations. This will be accomplished by the Executive Planning Team member with their respective departments to integrate mitigation strategies into their planning documents and operational guidelines. FEMA identifies four types of capabilities: Planning and Regulatory, Administrative and Technical, Financial, and Education and Outreach. Following are explanations drawn from “Beyond The Basics” a website developed as part of a multi-year research study funded by the U.S. Department of Homeland Security, Coastal Resilience Center and led by the Center for Sustainable Community Design within the Institute for the Environment at the University of North Carolina at Chapel Hill and the Institute for Sustainable Coastal Communities at Texas A&M University. This excellent resource ties FEMA regulations together with best practices in hazard mitigation.

Planning and Regulatory

Planning and regulatory capabilities are based on the implementation of ordinances, policies, local laws and State statutes, and plans and programs that relate to guiding and managing growth and development. Examples of planning capabilities that can either enable or inhibit mitigation include comprehensive land use plans, capital improvements programs, transportation plans, small area development plans, disaster recovery and reconstruction plans, and emergency

preparedness and response plans. Plans describe specific actions or policies that support community goals and drive decisions. Likewise, examples of regulatory capabilities include the enforcement of zoning ordinances, subdivision regulations, and building codes that regulate how and where land is developed and structures are built. Planning and regulatory capabilities refer not only to the current plans and regulations, but also to the community's ability to change and improve those plans and regulations as needed.

Administrative and Technical

Administrative and technical capability refers to the community's staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions. It also refers to the ability to access and coordinate these resources effectively. Think about the types of personnel employed by each jurisdiction, the public and private sector resources that may be accessed to implement mitigation activities in your community, and the level of knowledge and technical expertise from all of these sources. These include engineers, planners, emergency managers, GIS analysts, building inspectors, grant writers, floodplain managers, and more. For jurisdictions with limited staff resources, capacity should also be considered; while staff members may have specific skills, they may not have the time to devote to additional work tasks.

The planning team can identify resources available through other government entities, such as counties or special districts, which may be able to provide technical assistance to communities with limited resources. For example, a small town may turn to county planners, engineers, or a regional planning agency to support its mitigation planning efforts and provide assistance. For large jurisdictions, reviewing administrative and technical capabilities may involve targeting specific staff in various departments that have the expertise and are available to support hazard mitigation initiatives. The degree of intergovernmental coordination among departments also affects administrative capability.

Financial

Financial capabilities are the resources that a jurisdiction has access to or is eligible to use to fund mitigation actions. The costs associated with implementing mitigation activities vary. Some mitigation actions, such as building assessment or outreach efforts, require little to no costs other than staff time and existing operating budgets. Other actions, such as the acquisition of flood-prone properties, could require a substantial monetary commitment from local, state, and federal funding sources. Some local governments may have access to a recurring source of revenue beyond property, sales, and income taxes, such as stormwater utility or development impact fees. These communities may be able to use the funds to support local mitigation efforts independently or as the local match or cost-share often required for grant funding.

Education and Outreach

This type of capability refers to education and outreach programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information. Examples include fire safety programs that fire departments deliver to students at local schools; participation in community programs, such as Firewise, TsunamiReady or StormReady; and activities conducted as part of hazard awareness campaigns, such as Fire Prevention Month or Flood Awareness Month.

The table below includes a broad range of capabilities within SCOE to successfully accomplish mitigation. See **Annexes** for the district Capability Assessments.

Table: Capability Assessment - Existing Processes and Programs for SCOE
 (Source: EPC and SCOE)

Type of Capability				Name of Capability	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
				SCOE Departments	
			X	Administration Department	The Superintendent and Community Engagement Specialist both play critical roles in day-to-day and disaster operations. Since the mitigation plan is a new policy document, both staff will need to be directly involved in the plan's implementation.
	X	X		Business Services Department	The purpose of Business Services is to provide the support and infrastructure needed by our schools to carry on the important work of educating the children of our community. Our number one job is to continuously improve the learning environment for all our students. Business Services addresses a wide range of issues and operations including risk management. Business Services will be instrumental in monitoring availability of grants and other funding sources to help implement the MJHMP.
X	X	X	X	Facilities Planning Department	Facilities Planning has the responsibility to provide the best possible facility-related environment for students and staff. This involves the continuous assessment of the needs of the schools and the development of plans to meet those needs. In addition, Facilities Planning works to identify all available fund sources required to make significant capital improvements for campuses. Working closely with architects and engineers, Facilities Planning develops detailed plans and specifications which must meet very stringent requirements. Facilities Planning can immediately incorporate many mitigation action items from the MJHMP into building designs. Also, they can share new mitigation-related building standards with the Executive Planning Team for inclusion in future updates to the plan.
	X		X	Maintenance and Operations Department	The mission of Maintenance and Operations is to provide the support and services necessary to ensure the school environment is conducive to student learning and improved academic performance. The team provides safe, clean, well-maintained, functional, and aesthetically pleasing facilities for the students and staff members, as well as visitors and the community as a whole. Maintenance and Operations staff are the "boots on the ground" who witness the results of deferred maintenance and hazard-related damages to the buildings and infrastructure. This information is of great importance to any priority changes or updates to the MJHMP. Additionally, staff interface with each of the campuses and with that comes opportunity to "teach by showing" activities that help to minimize threats associated with hazards.

Type of Capability				Name of Capability	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
	X			Sonoma County Board of Education	The Sonoma County Board of Education is comprised of five elected representatives from trustee areas that roughly correspond to the Sonoma County Board of Supervisor districts. The Sonoma County Superintendent of Schools serves as the ex-officio secretary to the County Board. The Board's policy and funding support is critical to the Mitigation Plan.
				SCOE Plans and Programs	
	X		X	Comprehensive School Safety Plan	The CSSP consists of several components, including identifying hazards. Hazard-related information from the MJHMP will be added to the CSSP.
	X		X	Emergency Response Plan	The ERP for SCOE identifies hazards and related response protocols. Various assignments are identified in the ERP which are assigned to staff. Training and exercises assist in informing the staff of their roles as well as sharing information about the various hazards.
	X		X	Facilities Master Plan	The Facilities Master Plan is a compilation of information, policies, and statistical data about a school district. It is organized to provide (1) a continuous basis for planning educational facilities that will meet the changing needs of a community; and (2) provide alternatives in allocating facility resources to achieve district's goals and objectives. It is used for planning facilities needs for either pupil enrollment growth or decline. Many of the mitigation action items in the plan will be added to the Facilities Master Plan which is ensure the implementation of the MJHMP.
		X		Capital Improvement Program	Phased and other long-term constructions projects are managed through the Capital Improvement Program. Such projects are funded through taxation, impact fees, and general obligation bonds.
	X			Maintenance Program	The Annual Budget includes funds for staffing, equipment, and supplies intended to reduce risk (e.g., tree trimming, clearing drainage systems).
	X	X	X	Annual Budget	The Annual Budget and its associated review, update, and approval process provide a plethora of opportunities to explain details tasks, priorities, and spending allocations for the projects, programs, and equipment supporting the efforts of SCOE and the districts. Many of the ongoing mitigation items in the plan are supported through the Annual Budget.
X				Building Code	SCOE adheres to the California Department of Education's "Field Act" that mandates minimum requirements for all buildings occupied with school children.
				SCOE External Agencies and Resources	

Type of Capability				Name of Capability	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
			X	Community Support	Support for mitigation can be gathered from parent groups, local citizen groups, and non-profit organizations focusing on environmental protection, emergency preparedness, access, and functional needs populations, etc.
	X		X	Cities, Towns, and Unincorporated Area Public Safety Entities	Within the project area there are numerous local governments providing law enforcement and fire suppression/prevention. Each entity provides technical expertise in a variety of public safety subject areas along with knowledge of regulatory requirements. Also, each maintains robust capabilities for education and outreach through a variety of venues and mediums.

Expanding and Improving on Capabilities

Planning and Regulatory Capabilities - SCOE builds and maintains its own buildings and infrastructure according to the CDE "Field Act". Future plans are laid out in the Facilities Maintenance Plan. The funding of future construction often relies on successful bond measures where plans and justifications are shared with the public. Given the fact this is the first mitigation plan for SCOE, the topic of mitigation has been limited to Environmental Impact Reports tied to major development projects. Although mitigation is new, schools are highly experienced in adhering to federal, state, and local mandate, and comply with a wide array of reporting requirements pertinent to school operations and student performance. That well-practiced experience positions the school's community as prepared to participate and respond as mitigation weaves itself into the school culture. Once complete, the MJHMP will be shared with the Sonoma County Office of Emergency Services which will result in more effective emergency planning. With all of the county's school district under one umbrella in the MJHMP, SCOE will take a more active role in coordinating and planning for all of the schools.

Administrative and Technical –

Existing SCOE capabilities are limited. Adding grant writing, GIS, mutual aid agreements, and a warning/notification system would greatly enhance the Office's capabilities. Grant writing capabilities will be especially important once the mitigation plan is approved by FEMA. That approval will trigger eligibility for a range of federal and state grants. Also, the Board of Education could form a sub-committee dedicated to land use matters and mitigation plan implementation. The Plan's opportunities for success will be increased by the Board's involvement. Perhaps in the future, SCOE will consider adding a staff position dedicated to overseeing all of the emergency planning efforts which could include the Comprehensive School Safety Plans, Emergency Response Plans, and updates to the MJHMP.

Finance -

School systems have a number of funding resource acquisition mechanisms that can be utilized for mitigation planning. Aside from the ability to levy taxes, charge impact fees, and initiate

general obligation bonds, schools and students are favored targets for philanthropic support. And while the need for fiscal resources for the school community in Sonoma County is at an all-time high as repetitive disaster plague the region, SCOE knows that the outcomes that hazard mitigation planning and project execution bring are transformative in making schools operationally safer. As student and staff safety is our number one priority, the mitigation planning effort and partnership with the County will serve to prioritize funding capture efforts to meet the objectives and initiatives undertaken herein. We envision inter-school and inter-agency collaborations and funding applications where mutual benefits are found, as well as regular solicitation of our business, industry, and private donor partners to satisfy the financial obligations found in executing hazard mitigation activities.

Education and Outreach –

Utilize parent groups, local citizen groups, and non-profit organizations to support and encourage SCOE mitigation as well as home and business mitigation. Enlist the Superintendent and Community Engagement Specialist in learning and talking about the MJHMP.

Q&A | ELEMENT A: PLANNING PROCESS | A4

Q: Does the plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))

A: See **Use of Existing Data** below.

Use of Existing Data

The Planning Team gathered and reviewed existing data and plans during plan writing and specifically noted as “sources”. Numerous electronic and hard copy documents were used to support the planning process:

Sonoma County Office of Education

<https://www.scoe.org/>

Applicable Incorporation: Board Members, Maps, Location, and the Environment

Sonoma County Multijurisdictional Hazard Mitigation Plan Update (2021)

<https://permitsonoma.org/longrangeplans/adoptedlong-rangeplans/hazardmitigation>

Applicable Incorporation: Maps, Location, Environment, Plans, Programs

State of California Hazard Mitigation Plan (2018)

<https://www.caloes.ca.gov/>

Applicable Incorporation: Used to identify hazards posing the greatest threat to State.

HAZUS Maps and Reports

Created by Emergency Planning Consultants

Applicable Incorporation: Numerous HAZUS maps and reports have been included for Earthquake to determine specific risks and impacts to the Project Area.

FEMA “How To” Mitigation Series (386-1 to 386-9)

www.fema.gov/media

Applicable Incorporation: Mitigation Measures Categories and 4-Step Planning Process are quoted in the Executive Summary.

National Flood Insurance Program

www.fema.gov/national-flood-insurance-program

Applicable Incorporation: Used to confirm repetitive loss properties within the Project Area.

Local Flood Insurance Rate Maps

<https://msc.fema.gov/portal/home>

Applicable Incorporation: Provided by FEMA and included in Flood Hazard section.

California Department of Forestry and Fire Protection (CAL FIRE)

www.fire.ca.gov

Applicable Incorporation: Wildfire hazard mapping.

California Department of Conservation

www.conservation.ca.gov/cgs

Applicable Incorporation: Seismic hazards mapping.

U.S. Geological Survey (USGS)

www.usgs.gov

Applicable Incorporation: Earthquake records and statistics.

Using HAZUS for Mitigation Planning (2018)

[https://www.fema.gov/media-library-data/1540479624999-](https://www.fema.gov/media-library-data/1540479624999-ab1eca852448e271f0de82cf2031a01b/Using_Hazus_in_Mitigation_Planning_20180820_Final_508_Compliant.pdf)

[ab1eca852448e271f0de82cf2031a01b/Using_Hazus_in_Mitigation_Planning_20180820_Final_508_Compliant.pdf](https://www.fema.gov/media-library-data/1540479624999-ab1eca852448e271f0de82cf2031a01b/Using_Hazus_in_Mitigation_Planning_20180820_Final_508_Compliant.pdf)

Applicable Incorporation: HAZUS Information.

NOAA National Centers for Environmental Information, Climate at a Glance (2019)

<https://www.ncdc.noaa.gov/cag/county/time-series>

Applicable Incorporation: Data Image.

Beyond the Basics (website)

<https://mitigationguide.org/>

Applicable Incorporation: Definitions of Capability Assessment Categories.

Part II: RISK ASSESSMENT

Project Area Profile

Overview

The Sonoma County Office of Education (SCOE) is a strategic partner to the County of Sonoma's 38 school districts including 165 schools serving roughly 71,000 students (K-12). SCOE maintains a total of 12 buildings valued at \$51 million and 325 occupants. Each of the districts is autonomous and governed by its own board of trustees/education. The Sonoma County Office of Education's area of responsibility (Project Area) is the same as the County's boundaries.

Table: Sonoma County Office of Education Assets
(Source: SCOE 2023)

Sonoma County Office of Education Facilities	# Occupants	# Buildings	\$ Property Value (millions)	\$ Contents Value (millions)	\$ Total Value (millions)
SCOE					
SCOE Main Facility – Santa Rosa	220	1	10	3	13
SCOE Legal Facility – Santa Rosa	10	1	3	0.3	3.3
SCOE Overflow Parking Lot – Santa Rosa	0	0	2	0.0	2
SCOE Valley of the Moon – Santa Rosa (includes SELPA)	15	1	7	0.5	7.5
SCOE Juniper Shop Facility – Santa Rosa	5	1	1	0.1	1.1
SCOE - CBI	5	1	1	0.1	1.1
SCOE Sonoma Valley – Sassari Elementary	5	1	1	0.1	1.1
SCOE Petaluma City – 4C's McDowell Elementary	5	1	1	0.1	1.1
SCOE SELPA Properties					
SELPA Lewis Opportunity School – Santa Rosa	5	1	1	0.1	1.1
SELPA Headwaters Academy – Petaluma (includes Alternative Education)	20	1	7	0.5	7.5
Sonoma Community Center (SE)	5	1	1	0.1	1.1
SCOE Alternative Education Properties					
Satellite Office Space – Rohnert Park	0	1	1	0.1	1.1
Amarosa Academy – Santa Rosa	30	1	9	1	10
Totals	325	12	\$45 million	\$6 million	\$51 million

According to the LCAP for SCOE, Sonoma County covers over 1,700 square miles with an estimated 502,146 residents. There are 38 separate school districts, nine separate cities and large unincorporated rural and semi-rural areas. Socio-economic conditions within the county vary widely, including a spectrum from wealthy winery owners and retired corporate millionaires to suburban families, migrant farm workers and Native American residents living on isolated reservations. Highway 101 serves as a corridor linking the north county communities to Santa Rosa, the county's primary urban area with a population of 167,815 and the southernmost city of Petaluma.

Although the majority of the county's population (63.5%) is white, 38% of the county's population is made up of minorities, with Latinos representing 27% of the total. In the county schools, Latinos represent 45.5% of the total youth population and 50% of the total youth population is considered economically disadvantaged. While enrollment in Sonoma County schools had been decreasing since 2001, it began slowly increasing again in 2013-14, with a subsequent decrease in the 2016-17 and 2017-18 school years. In 2017-18, enrollment in Sonoma County schools was 70,449. The Sonoma County Office of Education (SCOE) Alternative Education Program provides education for students (grades 7-12) who have had difficulty in the traditional school setting or in the community. Daily academic instruction is provided for students who are detained or referred by districts because of expulsion, who self-select, or who benefit from a program based on alternative instructional strategies. The program has two "schools": Court School and Community School.

The Court School Program provides educational services to students who are incarcerated. The Juvenile Justice Center serves girls and boys, ages 12 to 18, who have been arrested and booked on criminal charges and are serving time or awaiting disposition by the court. The Probation Youth Camp classroom serves 16 to 18 year-old males and features vocational and school-to-career instruction. The Court School program served 311 students (unduplicated count) in the 2017-18 school year and 259 students to date in the 2018-19 school year.

The Community School Program provides an alternative learning environment for 12 to 18 year-old students in grades 7–12 who may be experiencing difficulties in a traditional school setting or who may be exhibiting negative behavior patterns in school or in the community. This program serves students who have been expelled from school, identified as habitually truant, placed on probation by the court, or otherwise referred by a school district, probation, or social service agency. The Community School program includes an Independent Study option and a Teen Parent Program. The emphasis of the Community School Program is to reestablish the educational direction of students and to transition them to a learning environment that meets their needs. Counseling and other support services are provided by public and community agencies. The Community School program served 142 students (unduplicated count) in the 2017-18 school year and 132 students to date in the 2018-19 school year.

Q&A | ELEMENT B3:

Q: Is there a description of each identified hazard’s impact on the community as well as an overall summary of the community’s vulnerability for each jurisdiction? (Requirement §201.6(b)(3))

A: See **Geography and Climate** below.

Geography and Climate

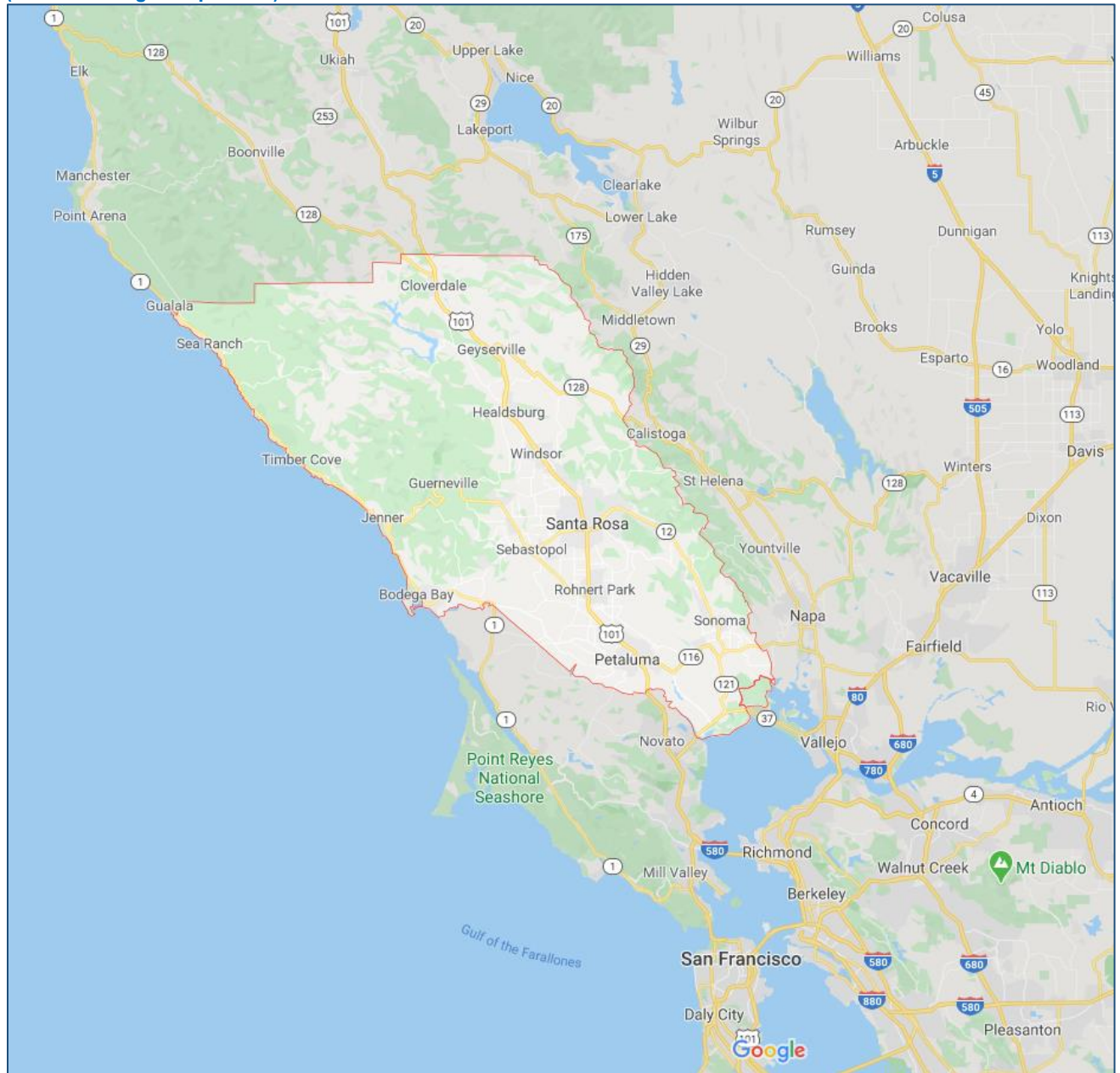
According to the 2021 Sonoma County Multijurisdictional Hazard Mitigation Plan, the county (also the project area) is the most northerly of nine counties in the San Francisco Bay Region, located along the Pacific coastline about forty miles north of San Francisco. Sonoma County is just over 1,500 square miles, making it the largest of the nine Bay Area counties. The Project Area are bordered by the Pacific Ocean on the west, Marin County and San Pablo Bay to the south, Solano, Napa and Lake Counties to the east, and Mendocino County to the north.

Topography within the Project Area is varied and includes mountainous areas, rolling hills and broad flat river valleys, and bay flats. The valleys and foothills are predominantly in agricultural uses with some urbanized areas and with a dense population. The area contains numerous watersheds, but the Russian River is the largest and most significant, draining over 1,485 square miles as it flows to the Pacific Ocean. The Russian River is the primary water supply and a key attraction to many communities along its banks. Approximately half of the project area is in rugged rural areas with limited access and most of the development in these areas is limited to open space and timber/natural resource production.

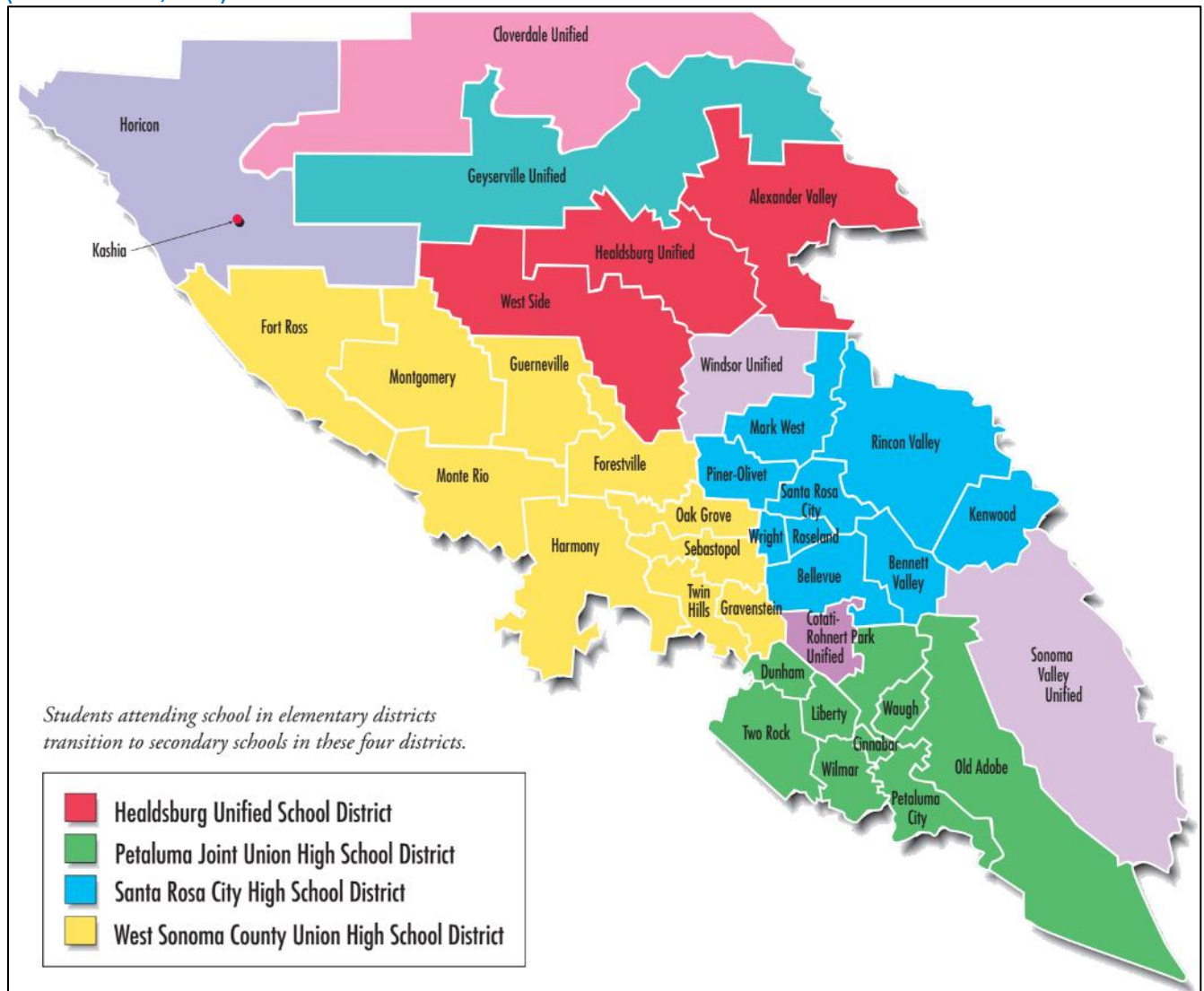
According to the Sonoma County Climate Action Plan (2016), the project area has a typical mediterranean climate with hot, dry summers and cool, wet winters. Rainfall and humidity are low. The annual average precipitation for the area is approximately 31 inches.



Map: Sonoma County Boundary (same as MJHMP project area)
(Source: Google Maps 2021)



Map: Sonoma County School Districts
 (Source: SCOE, 2020)



Risk Assessment

What is a Risk Assessment?

Conducting a risk assessment can provide information regarding: the location of hazards; the value of existing land and property in hazard locations; and an analysis of risk to life, property, and the environment that may result from natural hazard events. Specifically, the five levels of a risk assessment are as follows:

1. *Hazard Identification*
2. *Profiling Hazard Events*
3. *Vulnerability Assessment/Inventory of Existing Assets*
4. *Risk Analysis*
5. *Assessing Vulnerability/Analyzing Development Trends*

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1a.

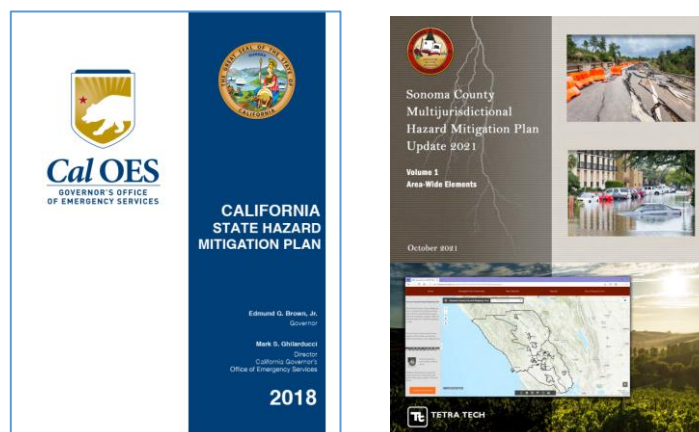
Q: Does the plan include a general **description** of all natural hazards that can affect each jurisdiction?
(Requirement §201.6(c)(2)(i))

A: See **Hazard Identification** below.

1) Hazard Identification

This section is the description of the geographic extent, potential intensity, and the probability of occurrence of a given hazard. Maps are used in this plan to display hazard identification data. The Planning Team utilized the categorization of hazards as identified in California's State Hazard Mitigation Plan, including Earthquakes, Floods, Levee Failures, Wildfires, Landslides and Earth Movements, Tsunami, Climate-Related Hazards, Volcanoes, and Other Hazards. Additionally, the Planning Team considered the hazards identified in the Sonoma County Multijurisdictional Hazard Mitigation Plan (2021) including Dam Failure, Drought, Earthquake, Flooding, Landslide/Mass Movement, Sea Level Rise, Severe Weather, Tsunami, Wildfire, and Climate Change.

Next, the Planning Team reviewed existing documents to determine which of the hazards posed the most significant threat to the Project Area and its ability to deliver services. In other words, which hazard would likely result in a local declaration of emergency.



The geographic extent of each of the identified hazards was identified by the Planning Team utilizing maps and data contained in the Sonoma County Multijurisdictional Hazard Mitigation Plan (2021).

The following hazards identified in the Sonoma County Multijurisdictional Hazard Mitigation Plan (2021) that have been omitted from inclusion in the SCOE MJHMP:

- ✓ Sea Level Rise – The Planning Team chose not to address this issue since there are no agency-owned facilities within the areas mapped as being prone to sea level rise.
- ✓ Climate Change – The Planning Team chose to break out what they perceived as the greatest areas of concern into the Utility Related Events Hazard Specific Chapter.

The following hazards identified in the Sonoma County Multijurisdictional Hazard Mitigation Plan (2021) that have not been omitted from the plan but were not fully profiled or CPRI ranked due to their low priority and the organization's limited capability to mitigate.

- ✓ Drought – The Planning Team chose to address this issue in the Utility Related Hazard-Specific Chapter.
- ✓ Dam Failure – The Planning Team included within the Flooding Hazard-Specific Chapter.
- ✓ Severe Weather – The Planning Team chose to address this issue in the Utility Related Hazard-Specific Chapter.

Equally important was the Planning Team's decision to add two hazards to the research and mitigation action items. The two hazards not included in the Sonoma County Multijurisdictional Hazard Mitigation Plan are Utility Related Events because of the Project Area's recent experience with Public Safety Power Shutoff (PSPS), and Epidemic / Pandemic / Vector-Borne Disaster Hazards because of the Project Area's recent experience with COVID-19.

Based on the reasoning above, the Planning Team identified the following hazards for research and analysis:

Earthquake | Flood | Landslide | Wildfire | Tsunami

Epidemic/Pandemic/Vector-Borne Diseases | Utility Related

Next, the Planning Team utilized the Calculated Priority Risk Index to rank the selected hazards. The hazard ranking system is described in **Table: Calculated Priority Risk Index**, while the actual ranking is shown in **Table: Calculated Priority Risk Index Ranking for the Project Area**. It's important to note that "maximum credible events" were used for each of the hazards. In other words, an event of such significance that the jurisdiction would declare a local emergency.

Table: Calculated Priority Risk Index
(Source: Federal Emergency Management Agency)

CPRI Category	Degree of Risk			Assigned Weighting Factor
	Level ID	Description	Index Value	
Probability	Unlikely	Extremely rare with no documented history of occurrences or events. Annual probability of less than 1 in 1,000 years.	1	45%
	Possibly	Rare occurrences. Annual probability of between 1 in 100 years and 1 in 1,000 years.	2	
	Likely	Occasional occurrences with at least 2 or more documented historic events. Annual probability of between 1 in 10 years and 1 in 100 years.	3	
	Highly Likely	Frequent events with a well-documented history of occurrence. Annual probability of greater than 1 every year.	4	
Magnitude/Severity	Negligible	Negligible property damage (less than 5% of critical and non-critical facilities and infrastructure). Injuries or illnesses are treatable with first aid and there are no deaths. Negligible loss of quality of life. Shut down of critical public facilities for less than 24 hours.	1	30%
	Limited	Slight property damage (greater than 5% and less than 25% of critical and non-critical facilities and infrastructure). Injuries or illnesses do not result in permanent disability, and there are no deaths. Moderate loss of quality of life. Shut down of critical public facilities for more than 1 day and less than 1 week.	2	
	Critical	Moderate property damage (greater than 25% and less than 50% of critical and non-critical facilities and infrastructure). Injuries or illnesses result in permanent disability and at least 1 death. Shut down of critical public facilities for more than 1 week and less than 1 month.	3	
	Catastrophic	Severe property damage (greater than 50% of critical and non-critical facilities and infrastructure). Injuries and illnesses result in permanent disability and multiple deaths. Shut down of critical public facilities for more than 1 month.	4	
Warning Time	> 24 hours	Population will receive greater than 24 hours of warning.	1	15%
	12–24 hours	Population will receive between 12-24 hours of warning.	2	
	6-12 hours	Population will receive between 6-12 hours of warning.	3	
	< 6 hours	Population will receive less than 6 hours of warning.	4	
Duration	< 6 hours	Disaster event will last less than 6 hours	1	10%
	< 24 hours	Disaster event will last less than 6-24 hours	2	
	< 1 week	Disaster event will last between 24 hours and 1 week.	3	
	> 1 week	Disaster event will last more than 1 week	4	

Table: Calculated Priority Risk Index Total and Priority Ranking for the Project Area
 (Source: MJHMP Planning Team)

Hazard	Probability	Weighted 45% (x.45)	Magnitude/Severity	Weighted 30% (x.3)	Warning Time	Weighted 15% (x.15)	Duration	Weighted 10% (x.1)	CPRI Total	Hazard Priority Ranking (H-High, M-Medium, L-Low) *
Earthquake	3	1.35	4	1.20	4	0.6	1	0.1	3.25	H
Wildfire	4	1.80	2	0.6	1	0.15	3	0.3	2.85	H
Utility Related	3	1.35	2	0.6	4	0.6	2	0.2	2.75	M
Epidemic/Pandemic/Vector-Borne Diseases	3	1.35	2	0.6	4	0.6	2	0.2	2.75	M
Flood	3	1.35	2	0.6	2	0.3	3	0.3	2.55	M
Landslide	3	1.35	1	0.3	4	0.6	2	0.2	2.45	L
Tsunami	1	0.45	2	0.6	4	0.6	2	0.2	1.85	L
*Hazard Priority Ranking High=CPRI score for probability + magnitude/severity (impact) = 6 or higher Medium=CPRI score for probability + magnitude/severity (impact) = 5 Low=CPRI score for probability + magnitude/severity (impact) = 3 or 4 N/A=CPRI score for probability + magnitude/severity (impact) = 2										

2) Profiling Hazard Events

This process describes the causes and characteristics of each hazard and the Project Area facilities, infrastructure, and environment that may be vulnerable to each specific hazard. A profile of each hazard discussed in this plan is provided in the Hazard Analysis. **Table: Hazard Profile of Location, Extent, Probability, and Recent Occurrence for the Project Area** indicates a generalized perspective of the community's vulnerability of the various hazards according to extent (or degree), location, probability, and most recent occurrence.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1b.

Q: Does the plan provide rationale for the omission of any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement §201.6(c)(2)(i))

A: See **Table: Hazard Profile of Location, Extent, Probability, and Recent Occurrence for the Project Area** below.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1c.

Q: Does the plan include a description of the **location** for all natural hazards that can affect each jurisdiction? (Requirement §201.6(c)(2)(i))

A: See **Table: Hazard Profile of Location, Extent, Probability, and Recent Occurrence for the Project Area** below.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1d.

Q: Does the plan include a description of the **extent** for all natural hazards that can affect each jurisdiction? (Requirement §201.6(c)(2)(i))

A: See **Table: Hazard Profile of Location, Extent, Probability, and Recent Occurrence for the Project Area** below.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2a.

Q: Does the plan include information on **previous occurrences** of hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

A: See **Table: Hazard Profile of Location, Extent, Probability, and Recent Occurrence for the Project Area** below.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2b.

Q: Does the plan include information on the **probability** of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

A: See **Table: Hazard Profile of Location, Extent, Probability, and Recent Occurrence for the Project Area** below.

Table: Hazard Profile: Location, Extent, Probability, and Recent Occurrence for the Project Area

Hazard	Location (Where)	Extent (How Big an Event)	Probability (How Often) *	Recent Occurrence
Earthquake	Entire Project Area	The Southern California Earthquake Center (SCEC) in 2007 concluded that there is a 99.7 % probability that an earthquake of M6.7 or greater will hit California within 30 years. ¹	Likely	2014 – West Napa Earthquake M6.0
Epidemic/Pandemic/ Vector-Borne Diseases	Entire Project Area	Uncontrollable virus infecting a large portion of the population with fatality rates greater than 2.0%.	Likely	2020 – Present COVID-19 Pandemic
Flood	District facilities located within 100-year flood zones. See hazard chapter for most vulnerable sites.	100-Year Flood Zone areas subject to inundation, flooding, and flash flooding.	Highly Likely	2019 – Russian River
Landslide	Four Districts have facilities located near landslide hazard zones.	Earthquake-induced and rain-induced landslide events possibly impacting dozens of structures.	Likely	2017 – Guerneville
Wildfire	Varies by location within the Project Area – see Wildfire Hazards chapter (Table: Map: Fire Hazard Severity Zones) for specific locations.	Ranges from Very Low to Very High Fire Hazard Severity Zone Ratings.	Likely	2020 - LNU Lightning Complex Fire
Tsunami	Pacific Ocean Coastline	Sonoma County identifies the entire project area as being outside of the Tsunami Risk Zone, with the exception of portions of the coastline.	Unlikely	No previous occurrences.
Utility Related	Entire Project Area	Impacts would range from mild to severe throughout the project area.	Likely	2019 – Kincade Fire
* Probability is defined as: Unlikely = 1:1,000 years, Possibly = 1:100-1:1,000 years, Likely = 1:10-1:100 years, Highly Likely = 1:1 year				
¹ Uniform California Earthquake Rupture Forecast				





HAZUS-MH

The hazard maps in the Mitigation Plan were generated by Emergency Planning Consultants using FEMA's Hazards United States – Multi Hazard (HAZUS-MH) software program. Please see **Attachments – HAZUS** (Attached Separately) for complete reports. Once the location and size of a hypothetical earthquake are identified, HAZUS-MH estimates the intensity of the ground shaking, the number of buildings damaged, the number of casualties, the amount of damage to transportation systems and utilities, the number of people displaced from their homes, and the estimated cost of repair and clean up. It's important to note that the "project area" is based on Census Tracts not jurisdictional boundaries.



As per FEMA's HAZUS Guidebook, HAZUS is a GIS-based software that can be used to estimate potential damage, economic loss, and social impacts from earthquakes, floods, tsunamis and hurricane wind hazards. The HAZUS software includes nationwide general GIS datasets, and a model for the four natural disasters below. The model results can support the risk assessment piece of mitigation planning.

Graphic: Model Results to Support Risk Assessment for Mitigation Planning
 (Source: Using HAZUS for Mitigation Planning, Federal Emergency Management Agency, 2018)

Earthquake model 	Estimates damages and losses to buildings, essential facilities, transportation, and utility lifelines from a single scenario or probabilistic earthquake analysis. There are also tools that allow the user to integrate earthquake hazard data generated outside of Hazus into the earthquake model. This model estimates debris generation, shelter requirements, casualties, and fire following an earthquake disaster.
Flood model 	Generates flood hazard data using nationwide hydrological datasets. There are also tools that allow the user to integrate flood hazard data generated outside of Hazus software into the flood model. This model estimates the expected levels of damage to infrastructure and buildings. Debris generation and shelter requirements, as well as agricultural losses, can be calculated with this model.
Tsunami model 	Can produce analyses that have several pre-tsunami and/or post-tsunami applications. Use of the methodology will generate an estimate of the consequences to a county or region of a "scenario tsunami," i.e., a tsunami with a specified inundation depth, velocity, and location. The resulting "loss estimate" generally will describe the scale and extent of damage and disruption that may result from the scenario tsunami.
Hurricane wind model 	Can create the wind hazard data from a historical or real-time event, probabilistic event, or from a user-defined scenario. Estimates of potential damage and economic loss to buildings can then be calculated. The storm surge analysis combines the wind and coastal flood model to simulate storm surge for historical, and manual hurricanes. The model combines the wind and flood losses.

HAZUS is packaged with datasets that include building inventories and infrastructure for the entire United States. Because HAZUS is currently built on GIS technology, the inventory and infrastructure datasets can be mapped and intersected with the hazard information created from the four models.

Following the intersection, HAZUS determines the effects of wind, ground shaking, and water depths on buildings and infrastructure to calculate losses and damages. The outputs and estimates can be used in hazard mitigation planning, emergency response, and planning for recovery and reconstruction.

Losses estimated in HAZUS are based on the accuracy of input data. Basic analysis can be developed using the default data and parameter data provided within HAZUS. Users can conduct more advanced analysis using more accurate data that is specific to the region, hazard, population, etc. User-supplied data improves the accuracy of inventories and/or parameters.

Advanced-level analyses may also incorporate data from third-party studies. The user must determine the appropriate level of analysis to meet the user's needs and resources.

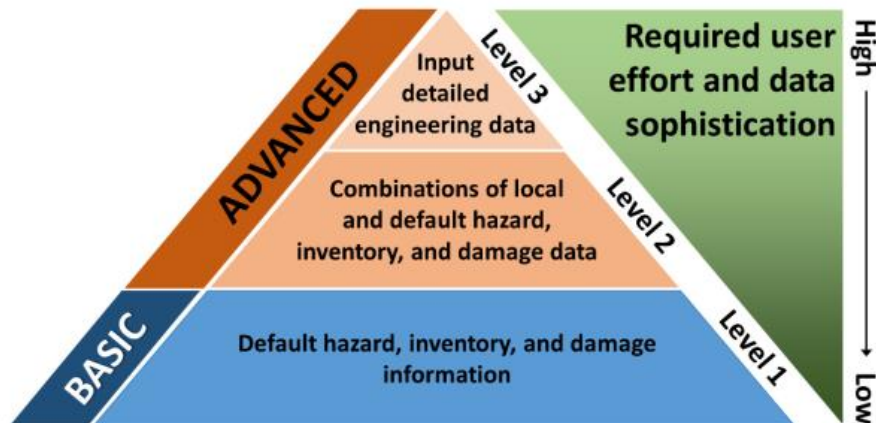
HAZUS analysis can be performed at three different levels:

- A Level 1 basic analysis can be performed simply using the default data provided. This level of analysis is very coarse, and because the results will be subject to a much higher level of uncertainty, this should serve primarily as a baseline for further study. The user will still be able to produce basic maps and results. Limited additional data will be required to complete the flood analysis. Site specific input data produces more accuracy in vulnerability identification and loss estimation amounts. If the data is available, it is highly recommended that a user integrate site specific data to reduce uncertainty associated with the results of default data. Using a user defined depth grid, in the flood model, against default state data is classified as a level 1 analysis and is the recommendation of HAZUS Program.
- A Level 2 advanced analysis increases the accuracy and precision of an analysis by incorporating user-supplied data relevant to a given hazard. While the data included with the HAZUS software can be utilized to run a basic level one analysis, level two inputs are supplied by local sources and contain a higher level of detail. This can include datasets that model the hazards in more detail, or datasets that increase the accuracy of the inventory information. Incorporating more detailed data will improve the quality of the results. Level 2 is broadly defined as the incorporation of user-defined hazard and updated GBS or site-specific data.
- A Level 3 advanced analysis achieves the highest degree of precision and involves modifying or substituting the model parameters and/or equations, relevant to a given hazard. Users can modify inputs depending on the time and resources available. Keeping track of the data used is suggested so that any relationships between input and results is documented. It is usually done by advanced users experienced with both the hazard and the HAZUS software.

FEMA's Natural Hazard Risk Assessment Program (NHRAP) encourages users to conduct Level 2 or 3 analyses to improve the accuracy of results and recommends the use of user defined data (e.g., depth grids for all flood analysis) for mitigation planning.

Graphic: HAZUS Analysis Levels

(Source: Using HAZUS for Mitigation Planning, Federal Emergency Management Agency, 2018)



HAZUS creates credible estimates for losses and damages; datasets created on the local level typically provide greater detail than the datasets that are packaged with HAZUS (Level 1). Incorporating local datasets into the analysis will improve the results.

HAZUS Outputs

The user plays a major role in selecting the scope and nature of the output of a HAZUS analysis. A variety of maps can be generated for visualizing the extent of the losses. Numerical results may be examined at the level of the census block or tract or may be aggregated by county or region. There are three main categories of HAZUS outputs: direct physical damage, induced damage, and direct losses. Direct physical damage includes general building stock (GBS), essential facilities, high potential loss facilities, transportation systems, utility systems, and user defined facilities. Induced damage includes building debris, tree debris generation and fire following disaster occurrence. Direct losses include losses for buildings, contents, inventory, income, crop damage, vehicle loss, injuries, casualties, sheltering needs and displaced households.

Graphic: HAZUS Outputs

(Source: Using HAZUS for Mitigation Planning, Federal Emergency Management Agency, 2018)

Hazus Capabilities	Earthquake Ground Shaking Ground Failure	Flood Frequency Depth Riverine Coastal Surge	Hurricane Wind Surge	Tsunami Depth Momentum Flux Runup Velocity
Inputs				
Historic	✓		✓	
Deterministic	✓	✓	✓	✓
Probabilistic	✓	✓	✓	
User-supplied	✓	✓	✓	✓
Other supported inputs	Real-time & scenario USGS ShakeMaps	Risk MAP, User-supplied depth grids (ArcGRID, GeoTIFF, IMAGINE), HEC-RAS (.FLT)	Hurrevac, User-supplied wind files (.dat)	NOAA PMEL SIFT, State models
Direct Damage				
General Building Stock	✓	✓	✓	✓
Essential Facilities	✓	✓	✓	
Transportation Systems	✓	✓		
Utility Systems	✓	✓		
User-Defined Facilities	✓	✓	✓	✓
Induced Damage				
Fire Following	✓			
Debris Generation	✓	✓	✓	
Direct Losses				
Cost of Repair	✓	✓	✓	✓
Income Loss	✓	✓	✓	✓
Agricultural		✓		
Casualties	✓			✓
Shelter and/or Evacuation Needs	✓	✓	✓	✓
Average Annualized Loss (AAL)	✓	✓	✓	

3) Vulnerability Assessment/Inventory of Existing Assets

A Vulnerability Assessment in its simplest form is a simultaneous look at the geographical location of hazards and an inventory of the underlying land uses (populations, structures, etc.). Facilities that provide critical and essential services following a major emergency are of particular concern because these locations house staff and equipment necessary to provide important public safety, emergency response, and/or disaster recovery functions.

Critical Facilities

FEMA separates critical buildings and facilities into the five categories shown below based on their loss potential. All of the following elements are considered critical facilities:

Essential Facilities are essential to the health and welfare of the whole population and are especially important following hazard events. Essential facilities include hospitals and other medical facilities, police and fire stations, emergency operations centers and evacuation shelters, and schools.

Transportation Systems include airways – airports, heliports; highways – bridges, tunnels, roadbeds, overpasses, transfer centers; railways – trackage, tunnels, bridges, rail yards, depots; and waterways – canals, locks, seaports, ferries, harbors, drydocks, piers.

Lifeline Utility Systems such as potable water, wastewater, oil, natural gas, electric power and communication systems.

High Potential Loss Facilities are facilities that would have a high loss associated with them, such as nuclear power plants, dams, and military installations.

Hazardous Material Facilities include facilities housing industrial/hazardous materials, such as corrosives, explosives, flammable materials, radioactive materials, and toxins.

Table: Hazard Proximity to Critical and Essential Facilities below illustrates the hazards with potential to impact critical facilities owned by or providing services to the Project Area.

Table: Hazard Proximity to Critical and Essential Facilities
(Source: Emergency Planning Consultants)

Y – Yes, area is within hazard zone

N – No, area is not within hazard zone

Agency and Facility	Earthquake	Wildfire	Landslide	Flooding	Tsunami	Utility Related Events	Epidemic/Pandemic/ Vector-borne Diseases
Alexander Valley Union School District							
Alexander Valley Union School District Office	Y	N	N	N	N	Y	Y
Alexander Valley School	Y	N	N	N	N	Y	Y
Bellevue Union School District							
Bellevue Union School District Office	Y	N	N	Y	N	Y	Y
Bellevue School	Y	N	N	N	N	Y	Y
Kawana Springs Elementary School	Y	N	N	N	N	Y	Y
Meadow View School	Y	N	N	N	N	Y	Y
Taylor Mountain School	Y	N	N	N	N	Y	Y
Bennett Valley Union School District							
Bennett Valley Union School District Office	Y	N	N	Y	N	Y	Y
Strawberry School	Y	N	N	Y	N	Y	Y
Yulupa School	Y	N	N	Y	N	Y	Y
Cinnabar School District							
Cinnabar School District Office	Y	N	N	N	N	Y	Y
Cinnabar Elementary School	Y	N	N	N	N	Y	Y
Cloverdale Unified School District							
Cloverdale Unified School District Office	Y	N	N	N	N	Y	Y
Cloverdale High School	Y	N	N	N	N	Y	Y
Jefferson School	Y	N	N	N	N	Y	Y
Johanna Echols-Hansen Continuation High School	Y	N	N	N	N	Y	Y
Washington School	Y	N	N	N	N	Y	Y
Cotati-Rohnert Park Unified School District							
Cotati-Rohnert Park Unified School District Office	Y	N	N	N	N	Y	Y
El Camino Continuation High School	Y	N	N	N	N	Y	Y
El Colegio (SE)	Y	N	N	N	N	Y	Y
Evergreen Elementary School	Y	N	N	N	N	Y	Y

Agency and Facility	Earthquake	Wildfire	Landslide	Flooding	Tsunami	Utility Related Events	Epidemic/Pandemic/ Vector-borne Diseases
John Reed School	Y	N	N	N	N	Y	Y
Lawrence E. Jones Middle School (SE)	Y	N	N	N	N	Y	Y
Marguerite Hahn Elementary School	Y	N	N	N	N	Y	Y
Monte Vista Elementary School	Y	N	N	N	N	Y	Y
Rancho Cotate High School (SE)	Y	N	N	N	N	Y	Y
Richard Crane Elementary	Y	N	N	N	N	Y	Y
Technology High School	Y	N	N	N	N	Y	Y
Technology Middle School	Y	N	N	N	N	Y	Y
Thomas Page Academy	Y	N	N	N	N	Y	Y
University Elementary at La Fiesta	Y	N	N	N	N	Y	Y
LaBath (SE)	Y	N	N	N	N	Y	Y
Dunham School District							
Dunham School District Office	Y	N	N	N	N	Y	Y
Dunham School	Y	N	N	N	N	Y	Y
Dunham Charter School	Y	N	N	N	N	Y	Y
Forestville Union School District							
Forestville Union School District Office	Y	Y	N	N	N	Y	Y
Forestville Academy	Y	Y	N	N	N	Y	Y
Forestville School	Y	Y	N	N	N	Y	Y
Fort Ross Elementary School District							
Fort Ross Elementary School District	Y	Y	Y	N	N	Y	Y
Fort Ross School	Y	Y	Y	N	N	Y	Y
Geyserville Unified School District							
Geyserville Unified School District Office	Y	Y	N	Y	N	Y	Y
Buena Vista High School	Y	Y	N	Y	N	Y	Y
Geyserville Elementary School	Y	Y	N	Y	N	Y	Y
Geyserville New Tech Academy	Y	Y	N	Y	N	Y	Y
Gravenstein Union School District							
Gravenstein Union School District	Y	N	N	Y	N	Y	Y
Gravenstein Community Day School	Y	N	N	Y	N	Y	Y

Agency and Facility	Earthquake	Wildfire	Landslide	Flooding	Tsunami	Utility Related Events	Epidemic/Pandemic/ Vector-borne Diseases
Gravenstein Elementary School	Y	N	N	Y	N	Y	Y
Gravenstein First	Y	N	N	Y	N	Y	Y
Hillcrest Middle School	Y	N	N	N	N	Y	Y
Guerneville School District							
Guerneville School District Office	Y	Y	Y	Y	N	Y	Y
Guerneville School	Y	Y	Y	Y	N	Y	Y
Harmony Union School District							
Harmony Elementary School District Office	Y	Y	Y	N	N	Y	Y
Harmony Elementary School	Y	Y	Y	N	N	Y	Y
Salmon Creek School: A Charter School	Y	Y	Y	N	N	Y	Y
Healdsburg Unified School District							
Healdsburg High School District Office	Y	N	N	Y	N	Y	Y
Healdsburg Charter School-Fitch Mountain Campus	Y	N	N	Y	N	Y	Y
Healdsburg Charter School-HES Campus	Y	N	N	Y	N	Y	Y
Healdsburg High School	Y	N	N	Y	N	Y	Y
Healdsburg Junior High School	Y	N	N	Y	N	Y	Y
HES-Fitch Mountain Campus	Y	N	N	Y	N	Y	Y
HES-Healdsburg Campus	Y	N	N	Y	N	Y	Y
Marce Becerra Academy	Y	N	N	Y	N	Y	Y
Horicon School District							
Horicon School District Office	Y	N	N	N	N	Y	Y
Horicon School	Y	N	N	N	N	Y	Y
Kashia School District							
Kashia School District Office	Y	N	N	N	N	Y	Y
Kashia School	Y	N	N	N	N	Y	Y
Kenwood School District							
Kenwood School District Office	Y	N	N	N	N	Y	Y
Kenwood School	Y	N	N	N	N	Y	Y
Liberty School District							
Liberty School District Office	Y	N	N	N	N	Y	Y

Agency and Facility	Earthquake	Wildfire	Landslide	Flooding	Tsunami	Utility Related Events	Epidemic/Pandemic/ Vector-borne Diseases
Liberty Elementary School	Y	N	N	N	N	Y	Y
Liberty Primary School	Y	N	N	N	N	Y	Y
Mark West Union School District							
Mark West Union School District Office	Y	Y	N	N	N	Y	Y
John B. Riebli Elementary School	Y	Y	N	N	N	Y	Y
Mark West Charter School	Y	N	N	N	N	Y	Y
Mark West Elementary School	Y	N	N	N	N	Y	Y
San Miguel Elementary School (SE)	Y	N	N	N	N	Y	Y
Monte Rio Union School District							
Monte Rio Union School District Office	Y	Y	N	Y	N	Y	Y
Monte Rio Union School	Y	Y	N	Y	N	Y	Y
Montgomery Elementary School District							
Montgomery Elementary School District Office	Y	Y	Y	N	N	Y	Y
Montgomery School	Y	Y	Y	N	N	Y	Y
Oak Grove Union School District							
Oak Grove Union School District Office	Y	Y	N	Y	N	Y	Y
Oak Grove Elementary School	Y	Y	N	N	N	Y	Y
Willowside Middle School	Y	Y	N	Y	N	Y	Y
Old Adobe Union School District							
Old Adobe Union School District Office	Y	Y	N	Y	N	Y	Y
La Tercera School (SE)	Y	Y	N	Y	N	Y	Y
Loma Vista Immersion Academy (SE)	Y	Y	N	Y	N	Y	Y
Miwok Valley Elementary Charter School	Y	Y	N	Y	N	Y	Y
Old Adobe Charter School	Y	Y	N	Y	N	Y	Y
Sonoma Mountain Charter School	Y	Y	N	Y	N	Y	Y
Petaluma City Schools District							
Petaluma City School District Office	Y	N	N	N	N	Y	Y
Grant School	Y	N	N	N	N	Y	Y
McDowell School	Y	N	N	N	N	Y	Y
McKinley School	Y	N	N	N	N	Y	Y

Agency and Facility	Earthquake	Wildfire	Landslide	Flooding	Tsunami	Utility Related Events	Epidemic/Pandemic/ Vector-borne Diseases
McNear School	Y	N	N	N	N	Y	Y
Penngrove School	Y	N	N	N	N	Y	Y
Valley Vista School	Y	N	N	N	N	Y	Y
Carpe Diem High School	Y	N	N	N	N	Y	Y
Casa Grande High School	Y	N	N	N	N	Y	Y
Kenilworth Junior High School	Y	N	N	N	N	Y	Y
Mary Collins at Cherry Valley Charter School	Y	N	N	N	N	Y	Y
Petaluma Accelerated Charter School	Y	N	N	N	N	Y	Y
Petaluma High School (SE)	Y	N	N	N	N	Y	Y
Petaluma Junior High School	Y	N	N	N	N	Y	Y
San Antonio High School	Y	N	N	N	N	Y	Y
Sonoma Mountain High School	Y	N	N	N	N	Y	Y
Valley Oaks High School	Y	N	N	N	N	Y	Y
Piner-Olivet Union School District							
Piner-Olivet Union School District Office	Y	Y	N	N	N	Y	Y
Jack London School (SE)	Y	Y	N	N	N	Y	Y
Northwest Prep at Piner-Olivet (SE)	Y	Y	N	N	N	Y	Y
Olivet Elementary (SE)	Y	Y	N	N	N	Y	Y
Piner-Olivet Charter School	Y	Y	N	N	N	Y	Y
Schaefer (Morrice) Charter School	Y	Y	N	N	N	Y	Y
Rincon Valley Union School District							
Rincon Valley Union School District Office	Y	N	N	N	N	Y	Y
Austin Creek School	Y	N	N	N	N	Y	Y
Binkley School	Y	N	N	N	N	Y	Y
Douglas L. Whited School	Y	N	N	N	N	Y	Y
Madrone Elementary School	Y	N	N	N	N	Y	Y
Rincon Valley Charter School: Matanzas (SE)	Y	N	N	N	N	Y	Y
Rincon Valley Charter School: Sequoia	Y	N	N	N	N	Y	Y
Sequoia School	Y	N	N	N	N	Y	Y
Spring Creek Matanzas Charter	Y	N	N	N	N	Y	Y

Agency and Facility	Earthquake	Wildfire	Landslide	Flooding	Tsunami	Utility Related Events	Epidemic/Pandemic/ Vector-borne Diseases
Village School	Y	N	N	N	N	Y	Y
Roseland Public Schools							
Roseland School District Office	Y	N	N	Y	N	Y	Y
Roseland Creek Elementary School	Y	N	N	N	N	Y	Y
Roseland Elementary School	Y	N	N	N	N	Y	Y
Sheppard Accelerated School	Y	N	N	N	N	Y	Y
Santa Rosa City Schools							
Santa Rosa City Schools District Office	Y	N	N	N	N	Y	Y
Abraham Lincoln School	Y	N	N	N	N	Y	Y
Albert F. Biella Elementary (SE)	Y	N	N	N	N	Y	Y
Brook Hill School	Y	N	N	Y	N	Y	Y
Cesar Chavez Language Academy	Y	N	N	N	N	Y	Y
Helen Lehman School	Y	N	N	N	N	Y	Y
Hidden Valley School	Y	Y	N	N	N	Y	Y
James Monroe School	Y	N	N	N	N	Y	Y
Luther Burbank School	Y	N	N	Y	N	Y	Y
Proctor Terrace School	Y	N	N	Y	N	Y	Y
Santa Rosa Accelerated Charter School	Y	Y	N	N	N	Y	Y
Santa Rosa French-American Charter School (SE)	Y	N	N	Y	N	Y	Y
Steele Lane School	Y	N	N	N	N	Y	Y
Comstock (Hilliard) Middle School (SE)	Y	N	N	N	N	Y	Y
Cook (Lawrence) Middle School (SE)	Y	N	N	N	N	Y	Y
Elsie Allen High (SE)	Y	N	N	N	N	Y	Y
Maria Carrillo High (SE)	Y	Y	N	N	N	Y	Y
Montgomery High School	Y	N	N	Y	N	Y	Y
Piner High School	Y	Y	N	N	N	Y	Y
Ridgway High School	Y	N	N	N	N	Y	Y
Rincon Valley Middle School	Y	Y	N	N	N	Y	Y
Santa Rosa High School	Y	N	N	N	N	Y	Y
Santa Rosa Middle School (SE)	Y	N	N	N	N	Y	Y

Agency and Facility	Earthquake	Wildfire	Landslide	Flooding	Tsunami	Utility Related Events	Epidemic/Pandemic/ Vector-borne Diseases
Slater (Herbert) Middle School	Y	N	N	N	N	Y	Y
SCOE							
SCOE Main Facility – Santa Rosa	Y	N	N	N	N	Y	Y
SCOE Legal Facility – Santa Rosa	Y	N	N	N	N	Y	Y
SCOE Overflow Parking Lot – Santa Rosa	Y	N	N	N	N	Y	Y
SCOE Valley of the Moon – Santa Rosa	Y	Y	N	N	N	Y	Y
SCOE Juniper Shop Facility – Santa Rosa	Y	N	N	N	N	Y	Y
SCOE - CBI	Y	N	N	N	N	Y	Y
SCOE Sonoma Valley – Sassari Elementary	Y	N	N	N	N	Y	Y
SCOE Petaluma City – 4C's McDowell Elementary	Y	N	N	N	N	Y	Y
SCOE SELPA Properties							
SELPA Lewis Opportunity School – Santa Rosa	Y	N	N	N	N	Y	Y
SELPA Headwaters Academy – Petaluma	Y	N	N	Y	N	Y	Y
SELPA Valley of the Moon – Santa Rosa	Y	Y	N	N	N	Y	Y
Sonoma Community Center (SE)	Y	N	N	Y	N	Y	Y
SCOE Alternative Education Properties							
Headquarters Academy – Petaluma	Y	N	N	Y	N	Y	Y
Satellite Office Space – Rohnert Park	Y	N	N	N	N	Y	Y
Amarosa Academy – Santa Rosa	Y	N	N	N	N	Y	Y
Sebastopol Union School District							
Sebastopol Union School District Office	Y	Y	N	N	N	Y	Y
Brook Haven School	Y	Y	N	N	N	Y	Y
Park Side School	Y	Y	N	N	N	Y	Y
Sonoma Valley Unified School District							
Sonoma Valley Unified School District Office	Y	N	N	N	N	Y	Y
Adele Harrison Middle School	Y	N	N	N	N	Y	Y
Altimira Middle School (SE)	Y	N	N	N	N	Y	Y
Creekside High School	Y	N	N	N	N	Y	Y
Dunbar School	Y	N	N	N	N	Y	Y
El Verano School	Y	N	N	N	N	Y	Y

Agency and Facility	Earthquake	Wildfire	Landslide	Flooding	Tsunami	Utility Related Events	Epidemic/Pandemic/ Vector-borne Diseases
Flowery School	Y	Y	N	N	N	Y	Y
Prestwood School	Y	N	N	N	N	Y	Y
Sassarini School	Y	N	N	N	N	Y	Y
Sonoma Valley High School	Y	N	N	N	N	Y	Y
Twin Hills Union School District							
Twin Hills Union School District Office	Y	N	N	N	N	Y	Y
Apple Blossom School	Y	N	N	N	N	Y	Y
Orchard View School	Y	N	N	N	N	Y	Y
SunRidge Charter School	Y	N	N	N	N	Y	Y
Twin Hills Charter Middle School	Y	N	N	N	N	Y	Y
Two Rock Union School District							
Two Rock Union School District Office	Y	N	N	N	N	Y	Y
Two Rock Union School	Y	N	N	N	N	Y	Y
Waugh School District							
Waugh School District Office	Y	Y	N	N	N	Y	Y
Corona Creek School	Y	Y	N	N	N	Y	Y
Meadow School	Y	Y	N	N	N	Y	Y
West Side Union School District							
West Side Union School District	Y	N	N	Y	N	Y	Y
West Side School	Y	N	N	Y	N	Y	Y
West Sonoma County High School District							
West Sonoma County High School District Office	Y	N	N	Y	N	Y	Y
Analy High School	Y	N	N	Y	N	Y	Y
El Molino High School	Y	N	N	N	N	Y	Y
Laguna High School	Y	N	N	Y	N	Y	Y
Wilmar Union School District							
Wilmar Union School District	Y	N	N	N	N	Y	Y
Wilson School	Y	N	N	N	N	Y	Y
Windsor Unified School District							
Windsor Unified School District Office	Y	N	N	Y	N	Y	Y

Agency and Facility	Earthquake	Wildfire	Landslide	Flooding	Tsunami	Utility Related Events	Epidemic/Pandemic/ Vector-borne Diseases
Brooks Elementary School	Y	N	N	Y	N	Y	Y
Cali Calmécac Language Academy	Y	N	N	Y	N	Y	Y
Mattie Washburn Elementary School	Y	N	N	Y	N	Y	Y
North Bay Met Academy	Y	N	N	Y	N	Y	Y
Windsor High School	Y	N	N	Y	N	Y	Y
Windsor Middle School (SE)	Y	N	N	Y	N	Y	Y
Wright Elementary School District							
Wright Elementary School District Office	Y	N	N	Y	N	Y	Y
J.X. Wilson School (SE)	Y	N	N	Y	N	Y	Y
Robert L. Stevens School	Y	N	N	Y	N	Y	Y
Wright Charter School	Y	N	N	Y	N	Y	Y
Wright Preschool	Y	N	N	Y	N	Y	Y

Earthquake Hazards

Hazard Definition

An earthquake is a sudden motion or trembling that is caused by a release of strain accumulated within or along the edge of the Earth's tectonic plates. The effects of an earthquake can be felt far beyond the site of its occurrence. They usually occur without warning and, after just a few seconds, can cause massive damage and extensive casualties. Common effects of earthquakes are ground motion and shaking, surface fault ruptures, and ground failure.



One tool used to describe earthquake “intensity” is the Magnitude Scale. The Magnitude Scale is sometimes referred to as the Richter Scale. The two are similar but not exactly the same. The Magnitude Scale was devised as a means of rating earthquake strength and is an indirect measure of seismic energy released. The Scale is logarithmic with each one-point increase corresponding to a 10-fold increase in the amplitude of the seismic shock waves generated by the earthquake. In terms of actual energy released, however, each one-point increase on the Richter scale corresponds to about a 32-fold increase in energy released. Therefore, a Magnitude 7 (M7) earthquake is 100 times (10 X 10) more powerful than a M5 earthquake and releases 1,024 times (32 X 32) the energy.

Table: Mercalli Scale and Peak Ground Acceleration Comparison
 (Source: Sonoma County Multijurisdictional Hazard Mitigation Plan 2021)

Modified Mercalli Scale	Perceived Shaking	Potential Structure Damage		Estimated PGA ^a (%g)
		Resistant Buildings	Vulnerable Buildings	
I	Not Felt	None	None	<0.17%
II-III	Weak	None	None	0.17% - 1.4%
IV	Light	None	None	1.4% - 3.9%
V	Moderate	Very Light	Light	3.9% - 9.2%
VI	Strong	Light	Moderate	9.2% - 18%
VII	Very Strong	Moderate	Moderate/Heavy	18% - 34%
VIII	Severe	Moderate/Heavy	Heavy	34% - 65%
IX	Violent	Heavy	Very Heavy	65% - 124%
X – XII	Extreme	Very Heavy	Very Heavy	>124%

a. PGA = peak ground acceleration. Measured in percent of g, where g is the acceleration of gravity
 Sources: USGS, 2008; USGS, 2010

Another tool used to describe earthquakes is in terms of “magnitude”. An earthquake’s magnitude is a measure of the energy released at the source of the earthquake. Magnitude is commonly expressed by ratings on the moment magnitude scale (Mw), the most common scale used today (USGS, 2017). This scale is based on the total moment release of the earthquake

(the product of the distance a fault moved and the force required to move it). The scale is as follows:

- Great— $M_w > 8$
- Major— $M_w = 7.0 - 7.9$
- Strong— $M_w = 6.0 - 6.9$
- Moderate— $M_w = 5.0 - 5.9$
- Light— $M_w = 4.0 - 4.9$
- Minor— $M_w = 3.0 - 3.9$
- Micro— $M_w < 3$

Earthquake Related Hazards

Ground shaking, landslides, and liquefaction are the specific hazards associated with earthquakes. The severity of these hazards depends on several factors, including soil and slope conditions, proximity to the fault, earthquake magnitude, and the type of earthquake.

Ground Shaking

Ground shaking is the motion felt on the earth's surface caused by seismic waves generated by the earthquake. It is the primary cause of earthquake damage. The strength of ground shaking depends on the magnitude of the earthquake, the type of fault, and distance from the epicenter (where the earthquake originates). Buildings on poorly consolidated and thick soils will typically see more damage than buildings on consolidated soils and bedrock.

Earthquake-Induced Landslides

Earthquake-induced landslides are secondary earthquake hazards that occur from ground shaking. They can destroy the roads, buildings, utilities, and other critical facilities necessary to respond and recover from an earthquake. Many communities in Southern California have a high likelihood of encountering such risks, especially in areas with steep slopes.

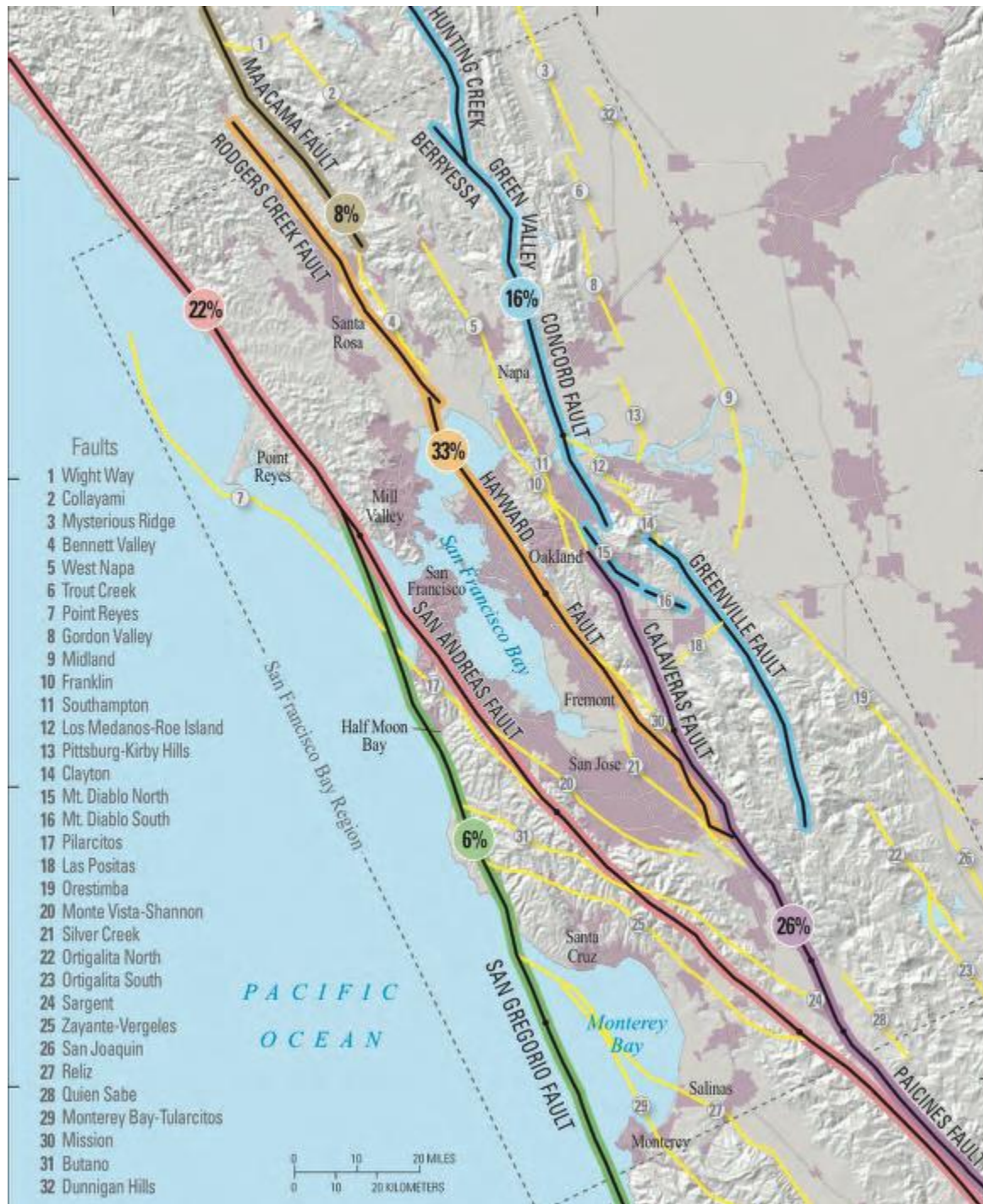
Rock falls may happen suddenly and without warning but are more likely to occur in response to earthquake induced ground shaking, during periods of intense rainfall, or as a result of human activities, such as grading and blasting. Ground acceleration of at least 0.10g in steep terrain is necessary to induce earthquake-related rock falls.

Liquefaction

Liquefaction is a phenomenon in which the strength and stiffness of a soil is reduced by earthquake shaking or other events. Liquefaction occurs in saturated soils, which are soils in which the space between individual soil particles is completely filled with water. This water exerts a pressure on the soil particles that influences how tightly the particles themselves are pressed together. Prior to an earthquake, the water pressure is relatively low. However, earthquake shaking can cause the water pressure to increase to the point where the soil particles can readily move with respect to each other. Because liquefaction only occurs in saturated soil, its effects are most commonly observed in low lying areas. Typically, liquefaction is associated with shallow groundwater, which is less than 50 feet beneath the earth's surface.

The potential for liquefaction in the Project Area exists primarily in the low-lying areas adjacent to San Pablo Bay; along the Russian and Petaluma Rivers, Santa Rosa and Sonoma Creeks; the Laguna de Santa Rosa and Santa Rosa Plains. **Map: Major Earthquake Faults & Areas of Liquefaction** shows the areas of liquefaction risk within the Project Area.

Map: Mapped Faults in Sonoma County
(Source: Sonoma County Multijurisdictional Hazard Mitigation Plan 2021)



Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2a.

Q: Does the plan include information on **previous occurrences** of hazard events for each jurisdiction?
(Requirement §201.6(c)(2)(i))

A: See **Previous Occurrences of Earthquakes in the Project Area** below.

Previous Occurrences of Earthquakes in the Project Area

According to the Sonoma County Multijurisdictional Hazard Mitigation Plan (2021), significant earthquakes have impacted the region historically, specifically the 1906 San Francisco Earthquake and the 1989 Loma Prieta Earthquake.

Table: Historical Earthquakes in Sonoma County

(Source: Sonoma County Multijurisdictional Hazard Mitigation Plan, 2021)

Year	Magnitude and Fault	Impact
1868	M7.2 Hayward Fault	Minimal damage due to sparse population at the time.
1898	M6.7 Rodgers Creek Fault	Minimal damage due to sparse population at the time.
1906	M8.3 San Andreas Fault	The only reported casualties in Sonoma County were in the City of Santa Rosa, where 65 persons died and 12 remained missing. The shaking lasted for about fifty seconds. The Santa Rosa Courthouse was destroyed by the shaking and ensuing fire, as were approximately eight blocks of commercial buildings. It was reported that almost all non-wood buildings were destroyed by the shaking alone.
1969	M5.7 Rodgers Creek/Healdsburg	Total property damage estimated at \$6 million including severe damage to multiple County buildings and schools. Fortunately, there was no loss of life from the earthquakes, which can be attributed to the earthquakes striking in the evening hours, when most residents were at home.
1989	M6.9 Loma Prieta Earthquake	Total property damage is estimated at \$6 billion. The quake killed 63 people and injured 3,757 throughout Northern California. It caused a total of over 16,700 housing units to be uninhabitable throughout the Monterey and San Francisco Bay Areas and left some 3,000-12,000 people homeless.
2014	M6.0 West Napa Fault	The epicenter was located about six miles southwest of the City of Napa and nine miles southeast of the City of Sonoma. 257 people were injured during the quake and one person was killed. 163 structures, many in downtown Napa, were severely damaged and red-tagged by Inspectors. Several structures in eastern Sonoma County were also severely damaged. An additional 3,517 structures were inspected, of which 1,749 were identified as being moderately damaged. Napa, Solano, and Sonoma County experienced electrical and water service disruptions.
2016	M5.0 The Geysers Earthquake	A 5.0 magnitude earthquake occurred 4 miles west of The Geysers and 14 miles southwest of Clearlake on December 14, 2016, following a series of medium size earthquakes in Mammoth Lakes and the Central Coast. This event was primarily felt in the Clearlake and Santa Rosa areas but was also felt throughout the Bay Area.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1a.

Q: Does the plan include a general **description** of all natural hazards that can affect each jurisdiction? (Requirement §201.6(c)(2)(i))

A: See **Local Conditions** below.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

Q: Is there a description of each identified hazard’s overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Local Conditions** below.

Local Conditions

The Sonoma County Office of Education is in an area of high seismic activity and several faults have the potential to cause damage to the region. The Project Area is located along the west coast of California where the Pacific Plate is slowly moving to the northwest. It grinds against the west-moving North American Plate creating large stresses. When the stress exceeds the strength of the earth materials, fault rupture occurs. As a result, the project area is seismically active, and several major faults traverse the region.

According to the Sonoma County Multijurisdictional Hazard Mitigation Plan (2021), three earthquake faults run the length of the County. The Northern Segment of the San Andreas Fault (plate boundary) crosses Sonoma County land at Bodega Bay but continues northward offshore. It appears to land again at Fort Ross and continues past the community of The Sea Ranch to the County’s northern border. The Rodgers Creek Fault connects southward to other faults that merge into the San Andreas Fault. The Maacama Fault lies to the east of the Healdsburg Fault and continues northward, passing east of the City of Cloverdale. The faults are all right lateral strike-slip faults, meaning that the land on the western side of the fault moves north in an earthquake. The locations of these faults are shown in **Map: Mapped Earthquake Faults** above. Seismic activity along other active regional faults, or unknown faults in the area could also affect the region.

Earthquakes that could significantly impact the Project Area would most likely originate from the San Andreas, Healdsburg, or Rodgers Creek Fault Zones. These faults are close enough in proximity or expected to generate strong enough shaking that could affect the District.

San Andreas Fault Zone

The San Andreas Fault Zone falls West and Southwest of SCOE. This fault zone extends from the Gulf of California northward to the Cape Mendocino area where it continues northward along the ocean floor. The total length of the San Andreas Fault Zone is approximately 750 miles. The activity of the fault has been recorded during historic events, including the 1906 (M8.0) event in San Francisco and the 1857 (M7.9) event between Cholame and San Bernardino, where at least 250 miles of surface rupture occurred. These seismic events are among the most significant earthquakes in California history. Geologic evidence suggests that the San Andreas Fault has a 50 percent chance of producing a magnitude 7.5 to 8.5 quake (comparable to the great San Francisco earthquake of 1906) within the next 30 years.

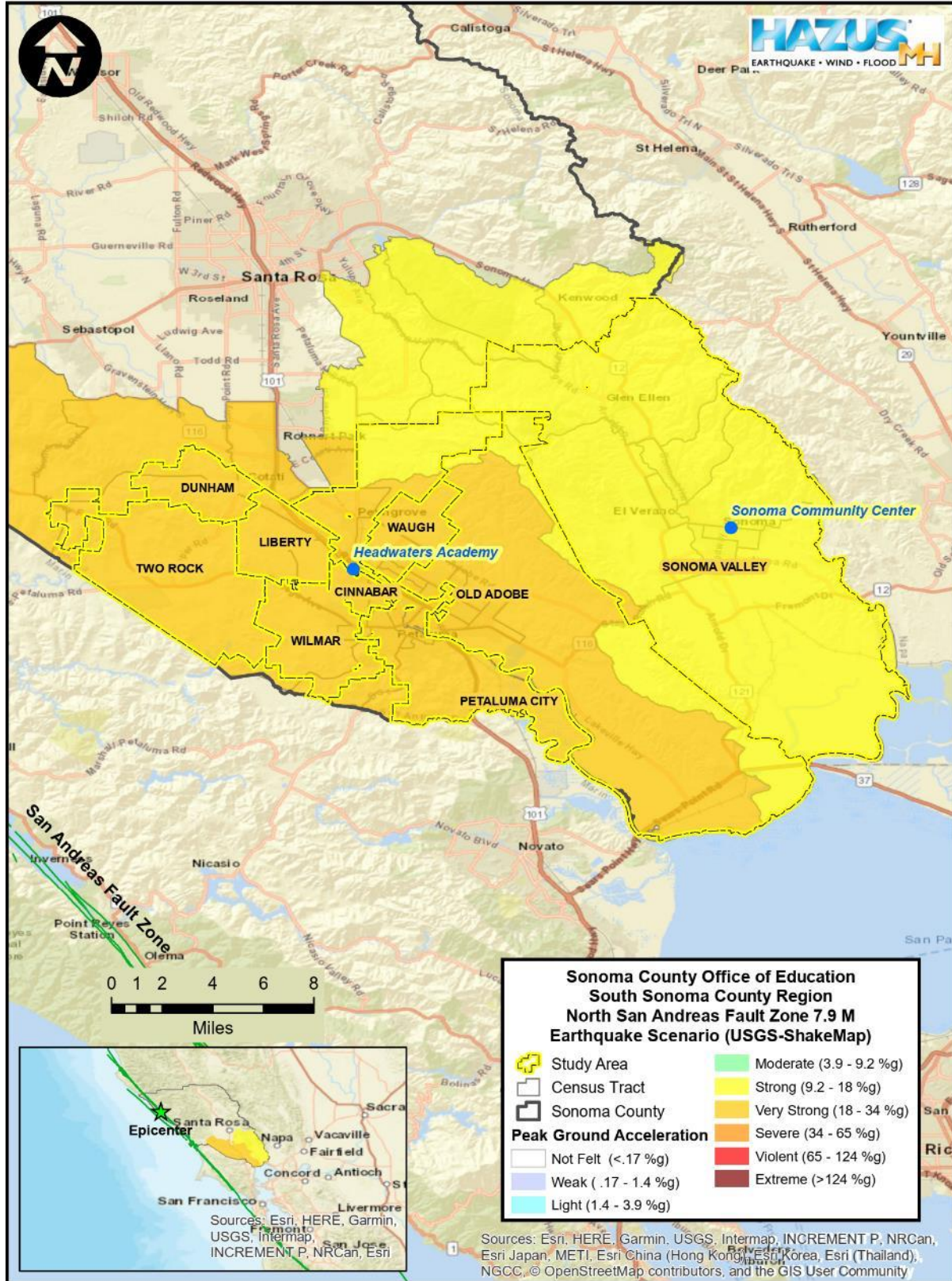
Map: Shake Intensity Map – San Andreas Fault M7.9 – North Sonoma County Region
 (Source: Emergency Planning Consultants)



Map: Shake Intensity Map – San Andreas Fault M7.9 – West Sonoma County Region
(Source: Emergency Planning Consultants, Date: 1.26.2020)



Map: Shake Intensity Map – San Andreas Fault M7.9 – South Sonoma County Region
(Source: Emergency Planning Consultants, Date: 1.26.2020)



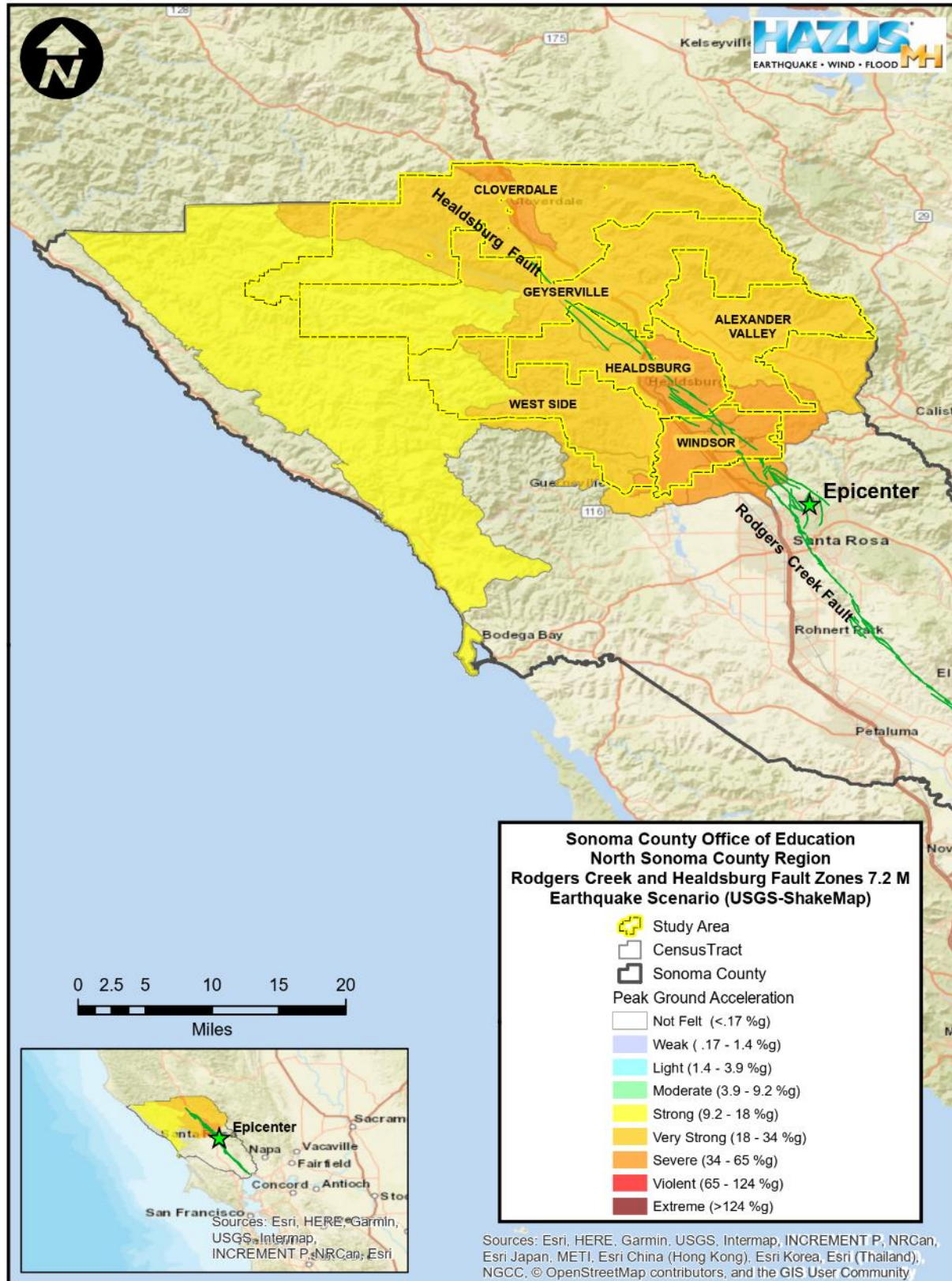
Rodgers Creek Fault

The Rodgers Creek Fault, which lies east of the San Andreas Fault, is the main strand of the North American-Pacific Plate boundary north of San Francisco Bay. USGS estimates there is a 33% chance of a $M \geq 6.7$ earthquake on the combined Rodgers Creek-Hayward fault system over the 30-year period 2014-2043. The Rodgers Creek fault is one fault in a series of right-stepping en-echelon faults that include the Hayward fault to the south, and the Healdsburg and Maacama faults to the north.

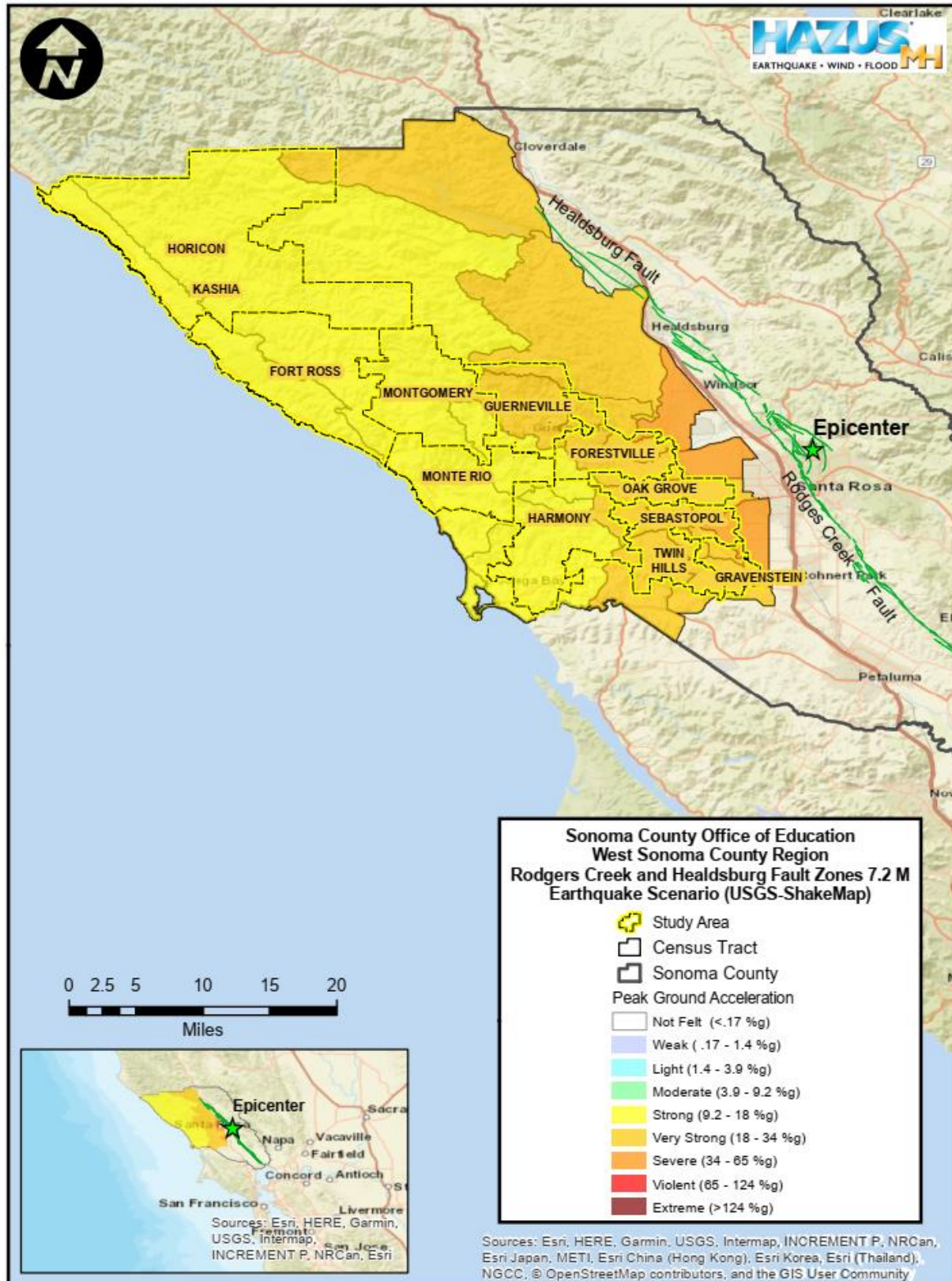
Healdsburg Creek Fault

The Healdsburg Fault is a northward, step-over extension of the Rodgers Creek Fault along the east side of the Cotati Valley north of Santa Rosa. The maximum credible earthquake expected to be generated from the Healdsburg Fault is estimated to be about M7.5.

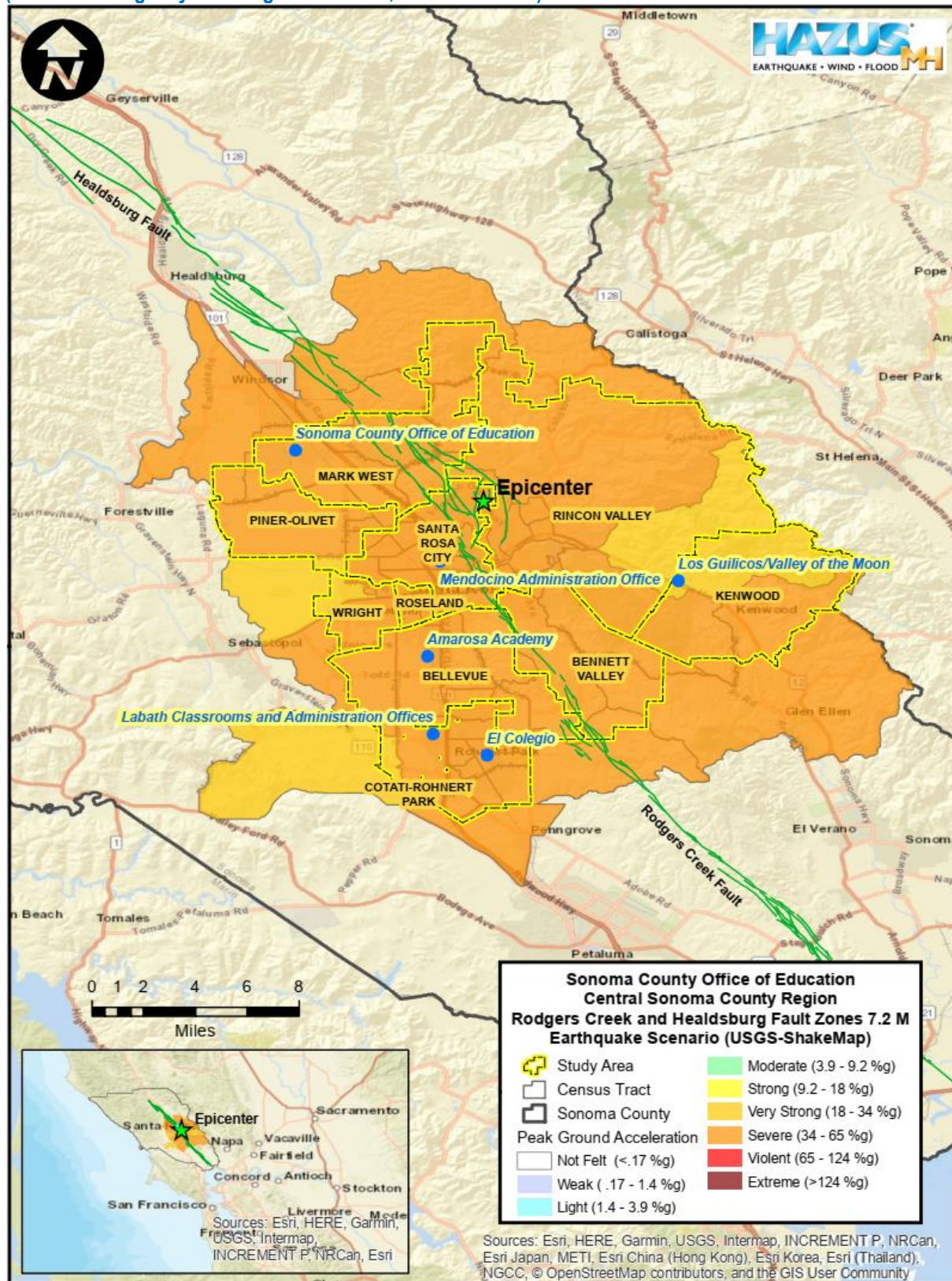
Map: Shake Intensity Map – Rodgers Creek & Healdsburg Fault Zones M7.2 – North Sonoma County Region
(Source: Emergency Planning Consultants, Date: 1.26.2020)



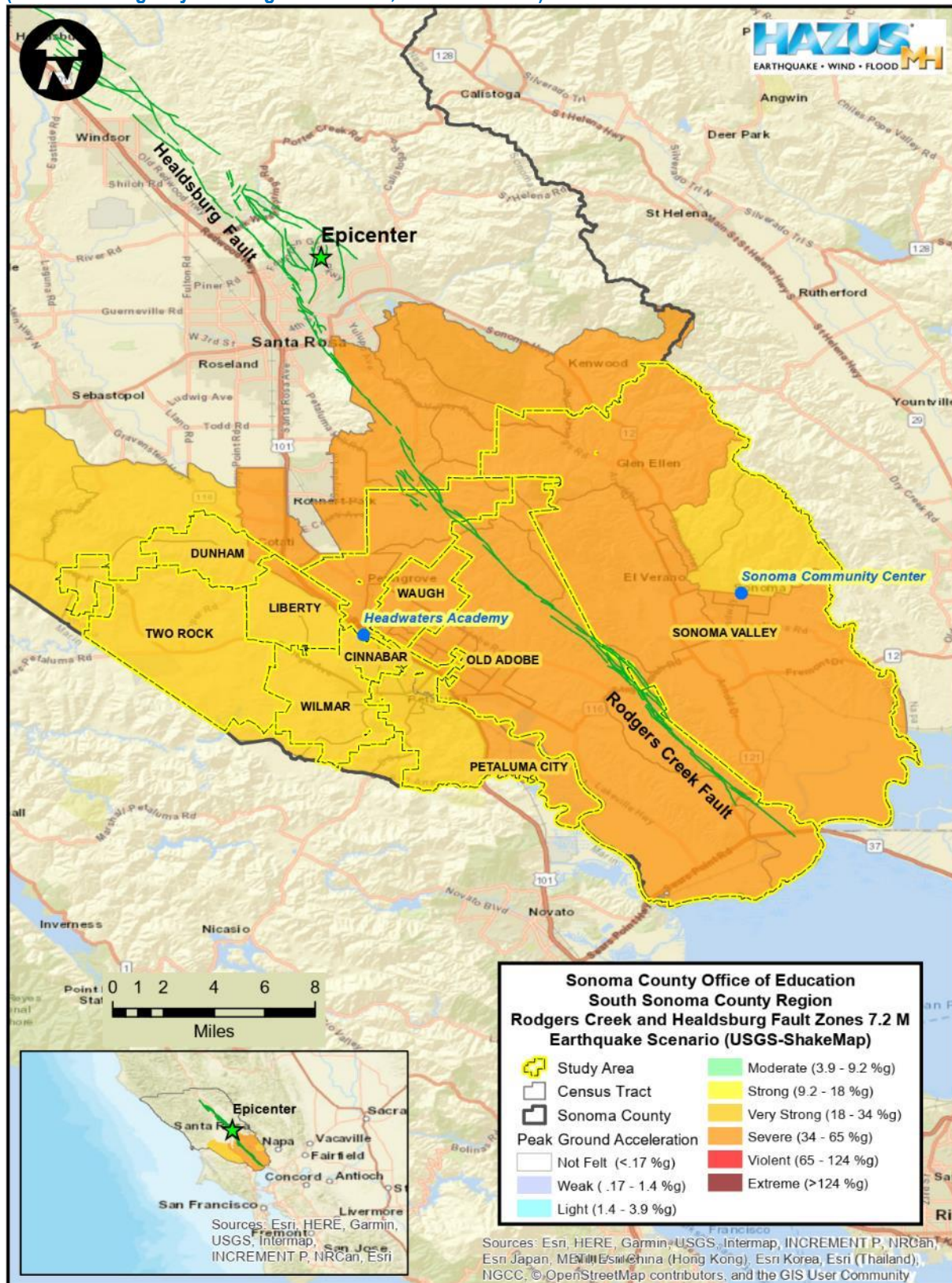
Map: Shake Intensity Map – Rodgers Creek & Healdsburg Fault Zones M7.2 – West Sonoma County Region
(Source: Emergency Planning Consultants, Date: 1.26.2020)



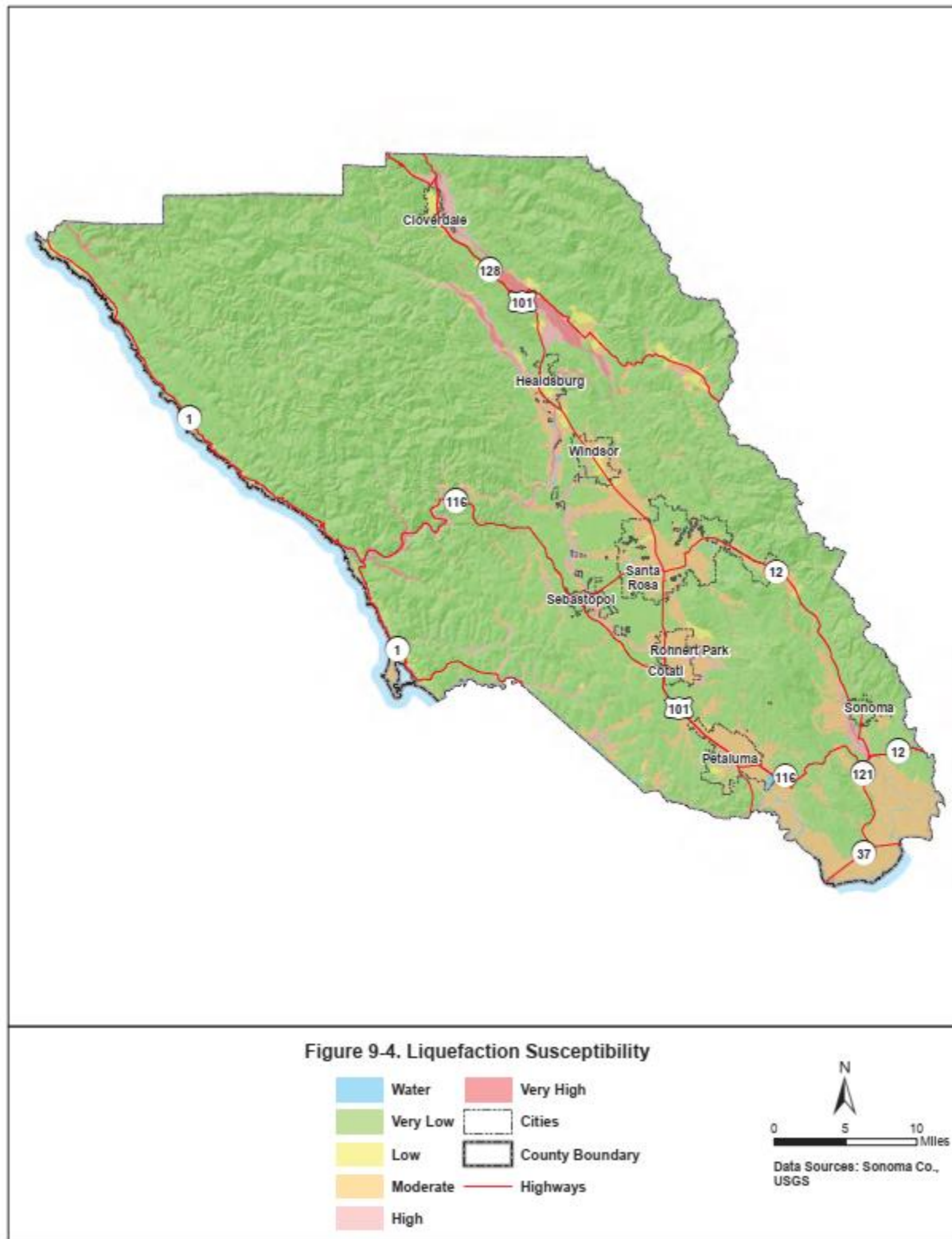
Map: Shake Intensity Map – Rodgers Creek & Healdsburg Fault Zones M7.2 – Central Sonoma County Region
(Source: Emergency Planning Consultants, Date: 1.26.2020)



Map: Shake Intensity Map – Rodgers Creek & Healdsburg Fault Zones M7.2 – South Sonoma County Region
(Source: Emergency Planning Consultants, Date: 1.26.2020)



Map: Liquefaction Susceptibility in Sonoma County
 (Source: Sonoma County Multijurisdictional Hazard Mitigation Plan 2021)



Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3a.

Q: Is there a description of each hazard's **impacts** on each jurisdiction (what happens to structures, infrastructure, people, environment, etc.)? (Requirement §201.6(c)(2)(ii))

A: See **Impact of Earthquakes in the Project Area** below.

Impact of Earthquakes in the Project Area

Based on the risk assessment, it is evident that earthquakes will continue to have potentially devastating economic impacts to the Project Area. Impacts that are not quantified, but can be anticipated in future events, include:

- ✓ Injury and loss of life,
- ✓ Commercial and residential structural damage,
- ✓ Disruption of and damage to public infrastructure,
- ✓ Secondary health hazards e.g. mold and mildew,
- ✓ Damage to roads/bridges resulting in loss of mobility,
- ✓ Significant economic impact (jobs, sales, tax revenue) upon the community,
- ✓ Negative impact on commercial and residential property values, and
- ✓ Significant disruption to students and teachers as temporary facilities and relocations would likely be needed.

Issues Relating to Earthquakes

The following information is drawn from the 2021 Sonoma County Multijurisdictional Hazard Mitigation Plan.

Important issues associated with an earthquake include the following:

- ✓ A large percentage of the Project Area is prone to liquefaction.
- ✓ Structures on these soils may experience significant structural damage.
- ✓ It is estimated more than a third of the planning area's building stock was built prior to 1975, when seismic provisions became uniformly applied through building code applications. Many structures may need seismic retrofits in order to withstand a moderate earthquake. Residential retrofit programs, such as Earthquake Brace+Bolt, may be able to assist in the costs of these efforts.
- ✓ Due to limitations in current modeling abilities, the risk to critical facilities in the planning area from the earthquake hazard is likely understated. A more thorough review of the age of critical facilities, codes they were built to, and location on liquefiable soils should be conducted.
- ✓ Damage to transportation systems in the planning area after an earthquake has the potential to significantly disrupt response and recovery efforts and lead to isolation of populations.
- ✓ Earthquakes can cause fires in wooden homes and the collapse of essential buildings such as fire stations.
- ✓ Landslides and tsunamis are major secondary hazards that could have a widespread effect on the county.
- ✓ Citizens are expected to be self-sufficient up to two weeks after a major earthquake without government response agencies, utilities, private-sector services, and infrastructure components. Education programs are currently in place to facilitate development of individual, family, neighborhood, and business earthquake preparedness.

It takes individuals, families, and communities working in concert with one another to be prepared for disaster.

- ✓ After a major seismic event, the planning area is likely to experience disruptions in the flow of goods and services resulting from the destruction of major transportation infrastructure across the broader region.
- ✓ A seismic event can damage communication systems, complicating efforts to coordinate response to the event.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

Q: Is there a description of each identified hazard’s overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Summary of Vulnerability to Earthquakes** below.

Summary of Vulnerability to Earthquakes

The following is a summary of vulnerability to earthquakes. All of SCOE-owned properties would be impacted by an earthquake including SCOE’s Main Facility, Legal Facility, Overflow Parking Lot, Valley of the Moon, Juniper Shop Facility, CBI, Sonoma Valley – Sassari Elementary, Petaluma City – 4C’s McDowell Elementary, and SELPA Properties Lewis Opportunity School, Headwaters Academy, Sonoma Community Center (SE), and SCOE Alternative Education Properties Satellite Office Space, and Amarosa Academy including a total of approximately 325 occupants, 12 buildings, and property/contents valued at \$51 million. These estimates are based on 2023.

The combination of plate tectonics and associated California coastal mountain range building geology generates earthquakes as a result of the periodic release of tectonic stresses. Sonoma County’s mountainous terrain lies in the center of the North American and Pacific tectonic plate activity. There have been earthquakes as a result of this activity in the historic past, and there will continue to be earthquakes in the future of the California north coastal mountain region. Fault ruptures themselves contribute very little to damage unless the structure or system element crosses the active fault; however, liquefaction can occur further from the source of the earthquake. In general, newer construction is more earthquake resistant than older construction due to enforcement of improved building codes. Many schools use portable buildings and classrooms to expand school footprints. These manufactured buildings are very susceptible to damage because their foundation systems are rarely braced for earthquake motions. Locally generated earthquake motions and associated liquefaction, even from very moderate events, tend to be more damaging to smaller buildings, especially those constructed of unreinforced masonry (URM) and soft story buildings.

According to the SCOE, there are no URM buildings owned by SCOE. The Uniform Building Code (UBC) identifies four seismic zones in the United States. California’s Field Act holds public school building construction to a higher standard than all other structures in the built environment. Portable classrooms are exempt from those regulations if the intended use is no longer than six years. Portables used by public schools for non-temporary purposes are required by the Field Act to have extra-strong construction, and to be bolted to a concrete foundation or wooden foundation secured to the ground. They are inspected during both manufacture and installation by the Division of the California State Architect. The SCOE understands that utilization of these buildings is rife throughout the County, particularly in smaller, more rural districts, and that many of these placements have outlived the six-year use mandate. That said, replacing these

structures with permanent buildings is well beyond the current budget allocation that most County schools receive and constitute a formidable financial burden. There are no recorded histories of any seismic related retrofits performed on school facilities within the County. Those historic structures that pre-date CDE building requirements for student and staff safety are no longer used for school functions.

Impacts from earthquakes in the SCOE will vary depending on the fault that the earthquake occurs on, the depth of the earthquake strike, and the intensity of shaking. Should ground shaking be intense, SCOE facilities and critical infrastructure could be damaged or destroyed. Of greater risk than the building is the students and staff who occupy those buildings; injury or loss of life could occur during a significant event. In addition to earthquakes causing structural damage, the SCOE has multiple non-structural components that may be damaged during earthquake shaking. Nonstructural components include furnishings and equipment, electrical and mechanical fixtures, and architectural features such as suspended ceilings, partitions, cabinets, and shelves. In general, nonstructural components and building contents become hazards when they slide, break, fall, or tip over during an earthquake. Securing the nonstructural components and building contents improves safety and security of the school facility. The only retrofitting projects that have been undertaken within the County in the last decade have been solar installations that in some instances have required non-structural elements—ground bracings and footing, as example.

Wildfire Hazards

Hazard Definition

Wildfire is an uncontrolled fire spreading through vegetative fuels and exposing or possibly consuming structures. They often begin unnoticed and spread quickly. Naturally occurring and non-native species of grasses, brush, and trees fuel wildfires. A wildland fire is a wildfire in an area in which development is essentially nonexistent, except for roads, railroads, power lines and similar facilities. A wildland/urban interface fire is a wildfire in a geographical area where structures and other human development meet or intermingle with wildland or vegetative fuels.



Wildfire Characteristics

There are three categories of wildland/urban interface fire: The classic wildland/urban interface exists where well-defined urban and suburban development presses up against open expanses of wildland areas; the mixed wildland/urban interface is characterized by isolated homes, subdivisions, and small communities situated predominantly in wildland settings. The occluded wildland/urban interface exists where islands of wildland vegetation occur inside a largely urbanized area. Certain conditions must be present for significant interface fires to occur. The most common conditions include hot, dry and windy weather; the inability of fire protection forces to contain or suppress the fire; the occurrence of multiple fires that overwhelm committed resources; and a large fuel load (dense vegetation). Once a fire has started, several conditions influence its behavior, including fuel topography, weather, drought, and development.



Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2a.

Q: Does the plan include information on **previous occurrences** of hazard events for each jurisdiction?
(Requirement §201.6(c)(2)(i))

A: See **Previous Occurrences of Wildfire in the Project Area** below.

Previous Occurrences of Wildfire in the Project Area

Wildfires, particularly wildland/urban interface fires, have historically occurred in Sonoma County and the Project Area. CAL FIRE has identified several “historic wildland fire corridors” in Sonoma County, including the Guerneville/Cazadero area which experienced fires in 1923, 1951, and 1978; the Geysers area which has experienced multiple fires, the most recently in 2013; and the 1964 Hanley fire area. Another area with a repetitive fire loss history is Sonoma Valley where the Cavedale fires of 1925 and 1996 caused significant property damage.

Table: Historic Wildfires in Sonoma County

(Source: Sonoma County Multijurisdictional Hazard Mitigation Plan 2021 and CALFIRE)

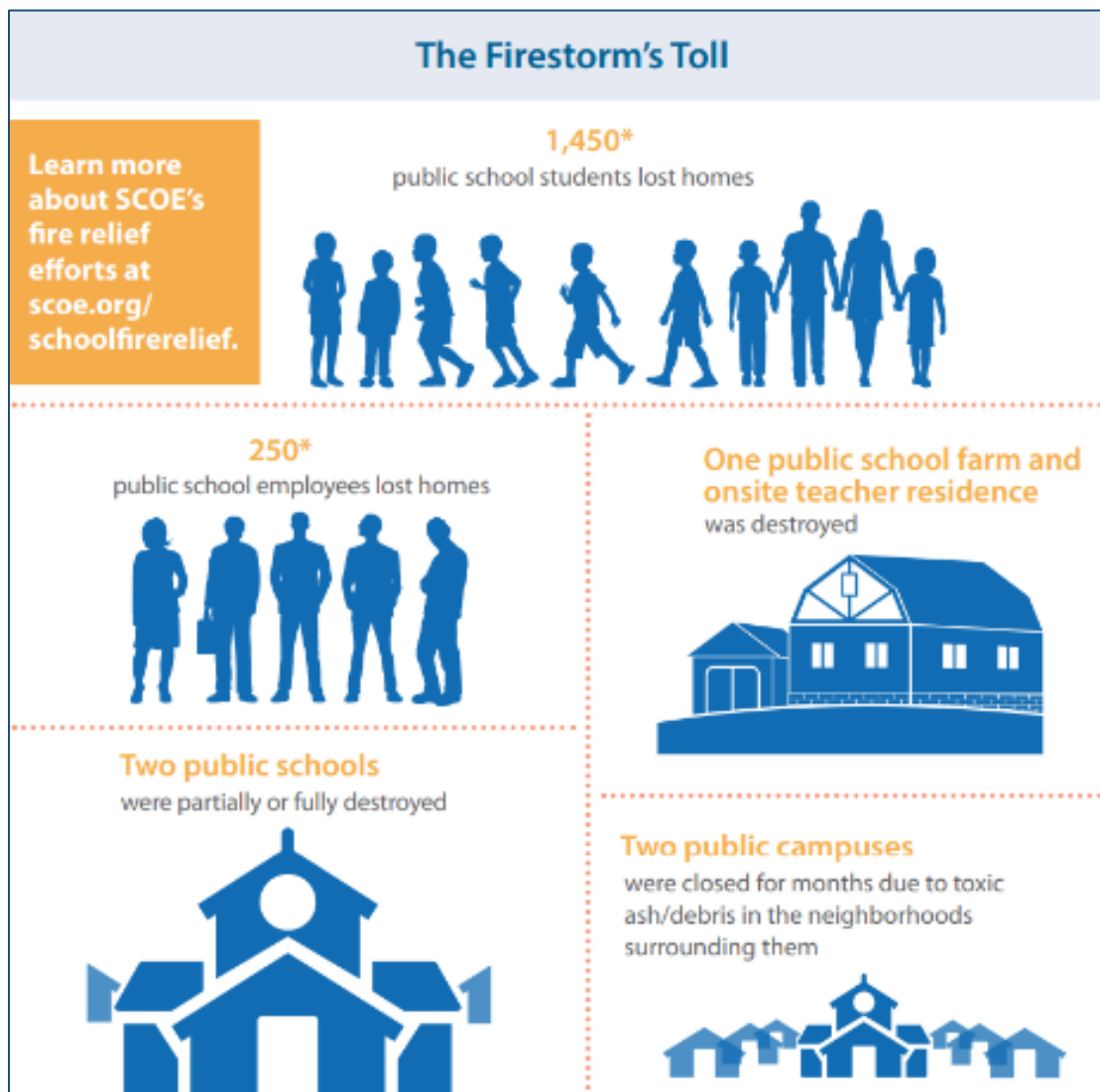
Year	Name	Acres Burned	Structures Burned
1964	Hanley	52,700	108
1964	Nuns Canyon	10,400	27
1965	Knight's Valley	6,000	0
1965	Pocket Ranch	4,000	0
1965	Austin Creek	7,000	0
1972	Bradford	1,760	4
1978	Creighton Ridge	11,405	64
1988	Cloverdale	1,833	100
1988	Geysers	9,000	7
1996	Porter Creek	300	0
1996	Cavedale	2,100	0
1999	Geyser Road	1,300	0
2000	Berryessa	5,731	15
2004	Geysers	12,000	6
2008	Pine	989	0
2013	McCabe	3,505	0
2015	Valley	76,067	1,955
2017	Sonoma Complex	110,700	6,997
2019	Kincade	77,758	374
2020	LNU Lightning Complex (Walbridge and Meyers)	57,563	303
2020	Glass	67,484	661

2017 Wildfires

On the night of October 8, 2017, a historic wind event led to one of the worst firestorms in Sonoma County history, followed by almost three weeks of fire. In total, the Nuns, Tubbs, and Pocket Fires (together comprising the Sonoma Complex Fire) burned over 110,700 acres in Sonoma and Napa counties. Twenty-four lives were lost as a result of the fires. According to the CA Insurance Commissioner, 6,997 structures were destroyed, resulting in direct losses exceeding \$7.8 billion dollars.



The wildfires that swept through Sonoma County took an unprecedented toll on all 40 school districts, 179 public schools, and roughly 70,500 students. The blazes left a great number of students and teachers without homes and reduced several school sites to ashes.



2019 Kincade Fire

The 2019 Kincade fire erupted on October 23, 2019, due to a damaged electrical transmission line controlled by PG&E near the community of Pulga. The fire, driven by strong winds, quickly spread in dry vegetation. The fire was fully contained on November 6, 2019, after burning roughly 77,758 acres. The fire threatened over 90,000 structures and caused widespread evacuations throughout Sonoma County, including the communities of Geyserville, Healdsburg, and Windsor. Evacuation orders and air quality concerns forced the closure of 23 districts within the Project Area.



2020 LNU Lightning Complex Fire

The LNU Lightning Complex fires were a large complex of wildfires that burned during the 2020 California wildfire season across much of the Wine Country area of Northern California – Lake, Napa, Sonoma, Solano, and Yolo Counties, from August 17 to October 2, 2020. The complex was composed of numerous lightning-sparked fires, most of which were small. However, while they initially started separate from each other, the Hennessey Fire eventually grew to merge with the Gamble, Green, Markley, Spanish, and Morgan Fires, scorching 192,000 acres by itself, for a total burn area of 363,220 acres in the complex. The fire, which burned in the hills surrounding several large cities, such as Fairfield, Napa, and Vacaville, destroyed 1,491 structures and damaged a further 232. In all, six people were killed and another five injured.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1a.

Q: Does the plan include a general **description** of all natural hazards that can affect each jurisdiction? (Requirement §201.6(c)(2)(i))

A: See **Local Conditions** below.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

Q: Is there a description of each identified hazard's overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Local Conditions** below.

Local Conditions

According to the Sonoma County Multijurisdictional Hazard Mitigation Plan (2021), the risk to many parts of the Project Area from wildfire is of significant concern. **See Map: Fire Hazard Severity Zones** for specific locations. The combination of highly flammable fuel, long dry summers and steep slopes creates a significant natural hazard of large wildland fires in many areas of Sonoma County. Wildland fire season in Sonoma County spans the months after the last spring rains have fallen and until the first fall or winter rains occur. The months of August, September and October have the greatest potential for wildland fires as vegetation dries out, humidity levels fall, and offshore winds blow. However, as effects of climate change are being realized, fire season has been lengthened and in drought conditions fires can occur at any time of year.

Fuels

Fuels consist of a variety of vegetation (grass, brush, or trees) available for combustion. The amount and density of fuel directly affects the intensity of the fire and the rate of fire spread. Different fuels have different burn qualities. For example, grasses release little energy, but can sustain extremely high rates of spread. Throughout the Project Area, there is a diverse range of fuels. The southern third of the project area is characterized by grasslands and/or oak woodland. Highly fire-prone nob cone pine and chaparral landscapes can be found in the east, along the Napa and Lake County lines. Redwood forest environments are found across the project area, especially along the north coast and in the lower Russian River drainage. In much of the oak woodlands, fire exclusion is allowing Douglas Fir and other brushy species to colonize the grass lands, changing fuel models, and increasing fire potential.

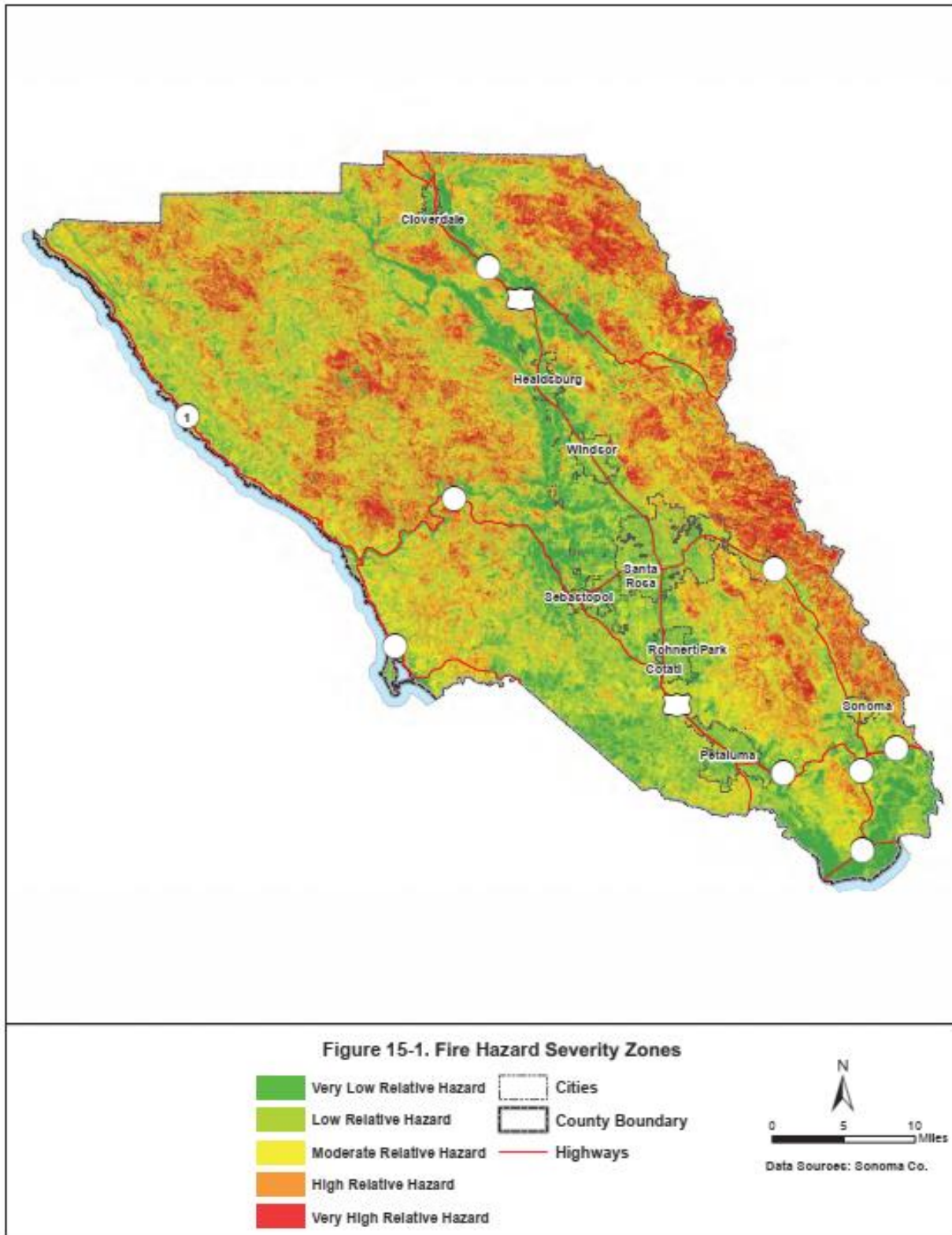
Weather

Strong and dry north-east Diablo winds significantly increase the likelihood and severity of wildland fires across Sonoma County. Except for areas immediately along the coast, during fire season the weather is generally warm and dry during the day, with peak summer day temperatures 80° – 100° F, and relative humidity ranging between 20% and 35%. Gradient winds are generally out of the South/Southwest at 5-10 mph, strengthening to 10-15 mph in the late afternoon and diminishing by dark. Coastal onshore flow, often accompanied by fog, frequently prevails after sunset, allowing for good nighttime relative humidity recovery in the warm inland areas.

Risk

Considering the above factors, CAL FIRE has mapped fire hazard severity levels in Sonoma County as shown in **Map: Fire Hazard Severity Zones**. Over half of Sonoma County has been rated as moderate or high fire hazard risk. Area of Very High Fire Severity Zone (VHFSZ) are designated along the mountainous eastern range of Sonoma County. Cloverdale Unified, Geyserville Unified, Alexander Valley, Healdsburg Unified, Rincon Valley, Kenwood, and Sonoma Valley Unified school districts are at considerable risk due to very high fire hazard severity zones.

Map: Fire Hazard Severity Zones
 (Source: Sonoma County Multijurisdictional Hazard Mitigation Plan 2021)



Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3a.

Q: Is there a description of each hazard's **impacts** on each jurisdiction (what happens to structures, infrastructure, people, environment, etc.)? (Requirement §201.6(c)(2)(ii))

A: See **Impact of Wildfire in the Project Area** below.

Impact of Wildfire in the Project Area

Wildfires and their impact vary by location and severity of any given wildfire event. Based on the risk assessment, it is evident that wildfires will continue to have potentially devastating economic impacts to the Project Area facilities. Impacts that are not quantified, but anticipated in future events include:

- ✓ Injury and loss of life,
- ✓ Commercial and residential structural damage,
- ✓ Disruption of and damage to public infrastructure,
- ✓ Secondary health hazards e.g. mold and mildew,
- ✓ Damage to roads/bridges resulting in loss of mobility,
- ✓ Significant economic impact (jobs, sales, tax revenue) upon the community,
- ✓ Negative impact on commercial and residential property values, and
- ✓ Significant disruption to students and teachers as temporary facilities and relocations would likely be needed.

Issues Relating to Wildfire

The following information is drawn from the 2021 Sonoma County Multijurisdictional Hazard Mitigation Plan.

Wildfire is an inevitable and normal ecological process in the fire-adapted landscape of Sonoma County. Nearly 100 years of aggressive fire suppression has contributed to the high wildfire risk of today. Absent fire for many years, wildland areas became overstocked with highly flammable vegetation. At the same time, expansion of homes into rural WUI areas increased the number of homes in high-risk areas. Typically, residential property owners do not maintain forested lands, exacerbating wildfire potential. On public lands, availability of budget for large-scale wildland fuels maintenance is an ongoing issue. Overcrowded conditions degrade overall forest health and degrade the environmental values provided by forest ecosystems. While in a few areas, recent wildfires burned hot enough to damage wildland ecosystems, in general wildland ecosystems have not sustained irrevocable damage. In many cases fires were beneficial. Large, uncontrolled wildfires can cause significant damage to ecosystem services, however life, home and economic losses to residents and communities must be considered along with environmental consequences.

Research shows that home loss in wildland fires is primarily driven by two equally important factors:

1 - The vulnerabilities of buildings that make them prone to ignition—Embers cause 80 percent of wildland fire home ignitions. The following elements are most vulnerable to embers but can be retrofitted on existing homes to reduce risk of ignition:

- ✓ Non-Class A roofs
- ✓ Roof edges and soffits
- ✓ Combustible plants and materials within 5 feet of house walls
- ✓ Non-WUI approved venting products that allow for ember entry into structures
- ✓ Wooden attachments, such as fences and decks

- ✓ Non-WUI rated windows
- ✓ Siding

2 - The vegetative fuels within 100 feet of structures (the area referred to as defensible space)—Good defensible space, wherein vegetation has been reduced to reduce fire intensity and spread, is critical to reduce ignition.

Most of the homes in Sonoma County’s WUI areas were constructed before 2008, when the WUI Building Code went into effect. This code requires ignition-resistant building materials in WUI areas. Structures built before it took effect and those without adequate vegetation management are at higher risk from wildland fire ignition.

Outside of the home and the 100-foot defensible space zone, surrounding wildland fuels can play a role in home destruction, as fire and embers can spread from nearby wildland areas into communities. It is in this area that vegetation management can come into play. This refers to actions taken to alter natural vegetation or plant communities that abut communities, usually on the scale of 10s to 1,000s of acres. Vegetation management can include prescribed fire, prescribed grazing, timber harvest techniques, invasive plant removal, or mechanical treatment to remove fine fuels, dense stands of fire-prone species, shrubs, and dead and dying vegetation. Fuels are reduced in order to create “community calming zones” or restore ecosystems to less flammable conditions. Strategically placed calming zones can reduce near-community fire intensity and spread, provide safe anchors that firefighters can use to stop forward progress of the fire, and supplement and support near-home mitigation strategies. Roadside fuels treatment can support emergency ingress and egress, increasing community and firefighter safety.

Although the patterns of land use, natural plant communities, topography, weather, soils, and geology vary across the landscapes of Sonoma County, notable patterns are discernible. An approach is needed for deploying existing techniques at the scale of whole communities. Such an approach would be informed by the principles of landscape ecology. It would view the natural lands where fires tend to originate and the built infrastructure of human communities that abut the natural landscapes as a coupled system. Mitigating large-scale loss of life and property can be achieved using relatively well-established techniques of home hardening, defensible space and vegetation management at the scale of whole communities and the natural landscapes that surround them.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

Q: Is there a description of each identified hazard’s overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Summary of Vulnerability to Wildfires** below.

Summary of Vulnerability to Wildfires

The following is a summary of vulnerability to wildfires for SCOE-owned properties. Valley of the Moon which serves as a nursery/child care and special needs facility. It is the only property vulnerable to direct impacts from wildfire including a total of approximately 15 occupants, 1 building, and property/contents valued at \$7.5 million. These estimates are based on 2023 data.

The wildfire hazard is one of the highest priority hazards in the County and is the hazard with the greatest potential for catastrophic loss. High fuel loads throughout the County, along with geographical and topographical features, create the potential for both natural and human-caused fires that can result in loss of life and property. These factors, combined with natural weather conditions common to the area, including periods of drought, high temperatures, low relative humidity, and periodic winds, can result in frequent and sometimes catastrophic fires. The more urbanized areas within the County are not immune from fire. The dry vegetation and hot and sometimes windy weather, combined with continued growth in the Wildland Urban Interface (WUI) areas, results in an increase in the number of ignitions. Any fire, once ignited, has the potential to quickly become a large, out-of-control fire. As development continues throughout the County, especially in these interface areas, the risk and vulnerability to wildfires will likely increase. Potential impacts from wildfire include loss of life and injuries; damage to structures and other improvements, natural and cultural resources, croplands, and timber; and loss of recreational opportunities. Wildfires can cause short-term and long-term disruption to the SCOE. Fires can have devastating effects on watersheds through loss of vegetation and soil erosion, which may impact the SCOE by changing runoff patterns, increasing sedimentation, reducing natural and reservoir water storage capacity, and degrading water quality. Fires can also affect air quality in the SCOE; smoke and air pollution from wildfires can be a severe health hazard.

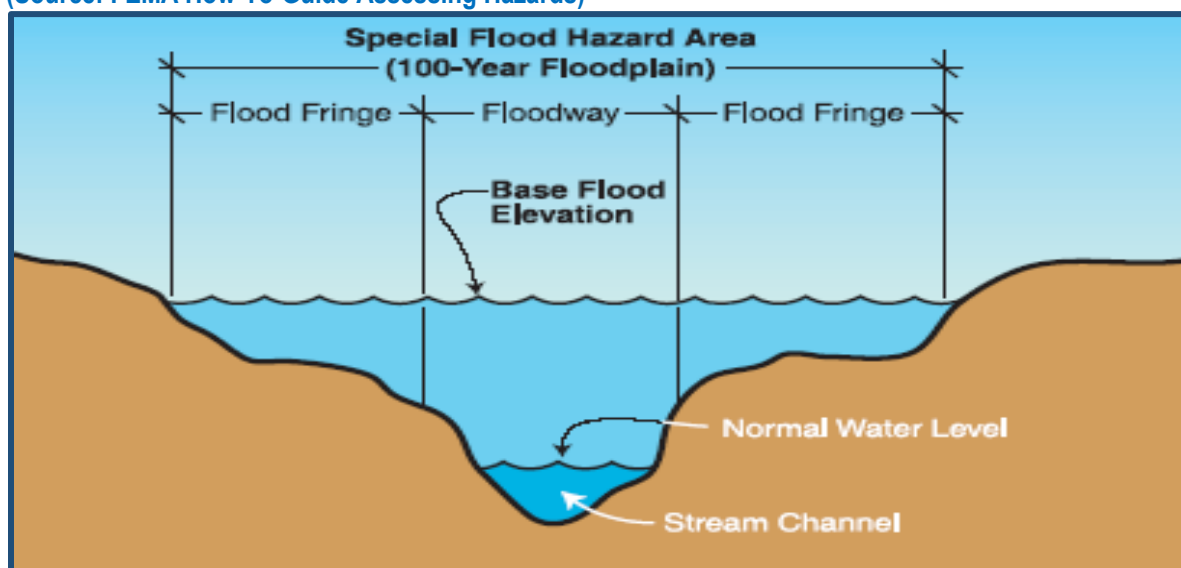
Although the physical damage and casualties arising from wildland-urban interface fires may be severe, it is important to recognize that they also cause significant economic impacts by resulting in a loss of function of buildings and infrastructure. Economic impacts of loss of transportation and utility services may include traffic delays/detours from road and bridge closures and loss of electric power, potable water, and wastewater services. Schools and businesses can be forced to close for extended periods of time. Recently, the threat of wildfire, combined with the potential for high winds, heat, and low humidity, has caused PG&E to initiate Public Safety Power Shutoffs (PSPSs) which can also significantly impact a community through loss of services, business closures, and other impacts associated with loss of power for an extended period. In addition, catastrophic wildfire can create favorable conditions for other hazards such as flooding, landslides, and erosion during the rainy season.

Flood Hazards

Hazard Definition

A floodplain is a land area adjacent to a river, stream, lake, estuary, or other water body that is subject to flooding. This area, if left undisturbed, acts to store excess flood water. The floodplain is made up of two sections: the floodway and the flood fringe. The 100-year flooding event is the flood having a one percent chance of being equaled or exceeded in magnitude in any given year. Contrary to popular belief, it is not a flood occurring once every 100 years. The 100-year floodplain is the area adjoining a river, stream, or watercourse covered by water in the event of a 100-year flood. Schematic: Floodplain and Floodway shows the relationship of the floodplain and the floodway.

Figure: Floodplain and Floodway
 (Source: FEMA How-To-Guide Assessing Hazards)



Types of Flooding

Two types of flooding primarily affect the region: slow-rise or flash flooding. Slow-rise floods may be preceded by a warning period of hours or days. Evacuation and sandbagging for slow-rise floods have often effectively lessened flood related damage. Conversely, flash floods are most difficult to prepare for, due to extremely limited, if any, advance warning and preparation time.



Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2a.

Q: Does the plan include information on **previous occurrences** of hazard events for each jurisdiction?
(Requirement §201.6(c)(2)(i))

A: See **Previous Occurrences of Flooding in the Project Area** below.

Previous Occurrences of Flooding in the Project Area

According to Sonoma County, floods are the most frequent natural hazard impacting the region, causing the greatest property losses and account for the highest number of local, Gubernatorial, and Presidential disasters. The Sonoma county Operational Area Emergency Operations Center (EOC) has been activated ten times due to flood related local emergencies since 1995.

In February 2019, the region experienced days of heavy rains and flooding along the Russian River causing mandatory evacuations of thousands of residents. The river crested at over 45 feet, the highest recorded level since 1995. Damage to Sonoma County roads was estimated at over \$23 million. Guerneville School was closed due to the flooding and damages were estimated between \$300 and \$700 thousand dollars.



Additional flooding events that have impacted the region surrounding the Project Area are below:

Table: Historical Flooding Events – Sonoma County

(Source: FEMA and Sonoma County Multijurisdictional Hazard Mitigation Plan 2021)

Date	Loss Estimates	Description
January 1995	\$21 million	<ul style="list-style-type: none"> Over 50 roads closed 15,000 residents without power Total displaced persons exceeded 2,000, of which 456 flood victims were evacuated by air 13 medical cases were treated, and 2 flood-related fatalities occurred
March 1995	\$13.3 million	<ul style="list-style-type: none"> Over 100 roads closed 45,000 residents without power At least 3,000 residents displaced Up to 30 containers of possible toxic materials identified in the flood zone
December 1997	\$31 million	<ul style="list-style-type: none"> Up to 200 roads were closed or damaged temporarily 463 homes damaged

Date	Loss Estimates	Description
		<ul style="list-style-type: none"> 12,000 residents without power Over 1,200 victims evacuated their residences and 2 storm-related deaths occurred Sewage and treatment plants overflowed
February 1998	\$28 million	<ul style="list-style-type: none"> 200 roads were listed as flooded or closed 6,400 residents without power 250+ homes were inundated 1,200 residents voluntarily evacuated 4 storm-related deaths
December 2005	\$104 million	<ul style="list-style-type: none"> Over 100 roads closed due to flooding and landslides Approximately 50,000 county residents without power 2106 properties inundated, 67 declared uninhabitable Unknown number of self-evacuations Laguna Wastewater Treatment Plant flooded with partially treated sewage spill into the Laguna
December 2014	\$1.1 million	<ul style="list-style-type: none"> 48 businesses and single-family dwellings damaged along Foss Creek
January 2017	\$162.3 million	<ul style="list-style-type: none"> Severe winter storms, flooding, and mudslides
February 2017	\$537.1 million	<ul style="list-style-type: none"> Severe winter storms, flooding, mudslides
February 2019	\$56 million	<ul style="list-style-type: none"> Guerneville significantly impacted \$23 million in road damage 1,900 homes damaged and 578 businesses

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1a.

Q: Does the plan include a general **description** of all natural hazards that can affect each jurisdiction? (Requirement §201.6(c)(2)(i))

A: See **Local Conditions** below.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

Q: Is there a description of each identified hazard's overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Local Conditions** below.

Local Conditions

Flooding is a significant hazard within the Project Area due to high intensity rainstorms.

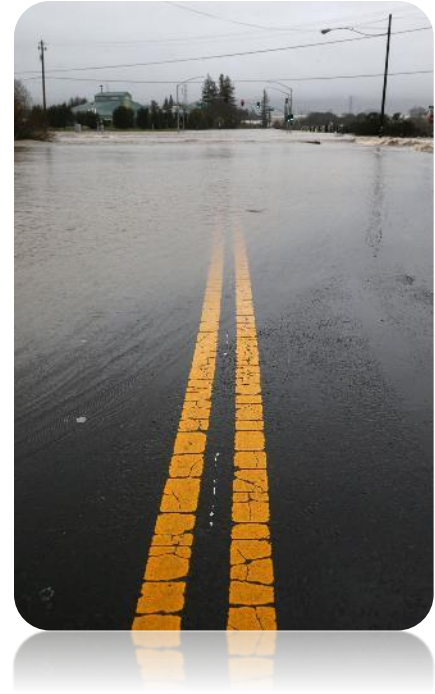
According to the NOAA, Sonoma County's Mediterranean climate is characterized by a summer dry season followed by a winter rainy season, generally extending from November to April. Precipitation in the Russian River is distinctly seasonal, 93 percent occurs during November through March. The bulk of the precipitation occurs during moderate storms of over several days. Rainfall varies throughout the county from 20 to 70 inches annually in the north central and the southeastern sections of the County.

The Federal Emergency Management Agency (FEMA) has identified 100 year flood zones in **Map: FEMA FIRM Flood Hazard Areas**.

According to Sonoma County Multijurisdictional Hazard Mitigation Plan (2021), damaging floods occur most frequently along the Russian River, Petaluma River, and Sonoma Creek; and the tributaries in these watersheds. Floods in Sonoma typically occur during the winter months, develop within 24 to 48 hours after a storm event, and recede within three days after the end of the storm. In the southwest segment of the Russian River, aka Lower Russian River, floods are characterized by high velocity and significant depth of flow due to the relatively narrow floodplain. The frequency of flooding in this portion of the river causes repetitive flood losses to occur in the residential and commercial districts of Mirabel Park, Duncans Mills, Monte Rio, Rio Nido and Guerneville.

The intensity, distribution and duration of rainfall are the most important factors in determining the magnitude of floods. If a storm event extends many hours or days, flooding can be enhanced as soils become saturated, reservoirs full and runoff from the upland and upstream areas accumulates downstream.

Within the Project Area, schools and properties located along the Russian River are at greatest risk of flooding events given the proximity to 100-year flood zones.



Map: FEMA FIRM Flood Hazard Areas
 (Source: Sonoma County Multijurisdictional Hazard Mitigation Plan 2021)



Q&A | ELEMENT C. MITIGATION STRATEGY | C2

Q: Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii))

A: See **NFIP Participation** below.

National Flood Insurance Program

The Project Area is fully contained within Sonoma County. The County participates in the National Flood Insurance Program (NFIP). Created by Congress in 1968, the NFIP makes flood insurance available in communities that enact minimum floodplain management rules consistent with the Code of Federal Regulations §60.3. However, special districts are prohibited from participating in NFIP.

Definitions of FEMA Flood Zone Designations

Flood zones are geographic areas that the FEMA has defined according to varying levels of flood risk. These zones are depicted on a community's Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Maps as shown in the maps above. Each zone reflects the severity or type of flooding in the area.

Moderate to Low Risk Areas

In communities that participate in the NFIP, flood insurance is available to all property owners and renters in these zones:

ZONE	DESCRIPTION
B and X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.
C and X (unshaded)	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that don't warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.

High Risk Areas

In communities that participate in the NFIP, mandatory flood insurance purchase requirements apply to all of these zones:

ZONE	DESCRIPTION
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
AE	The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.

ZONE	DESCRIPTION
A1-30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.
A99	Areas with a 1% annual chance of flooding that will be protected by a Federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.

Undetermined Risk Areas

ZONE	DESCRIPTION
D	Areas with possible but undetermined flood hazards. No flood hazard analysis has been conducted. Flood insurance rates are commensurate with the uncertainty of the flood risk.

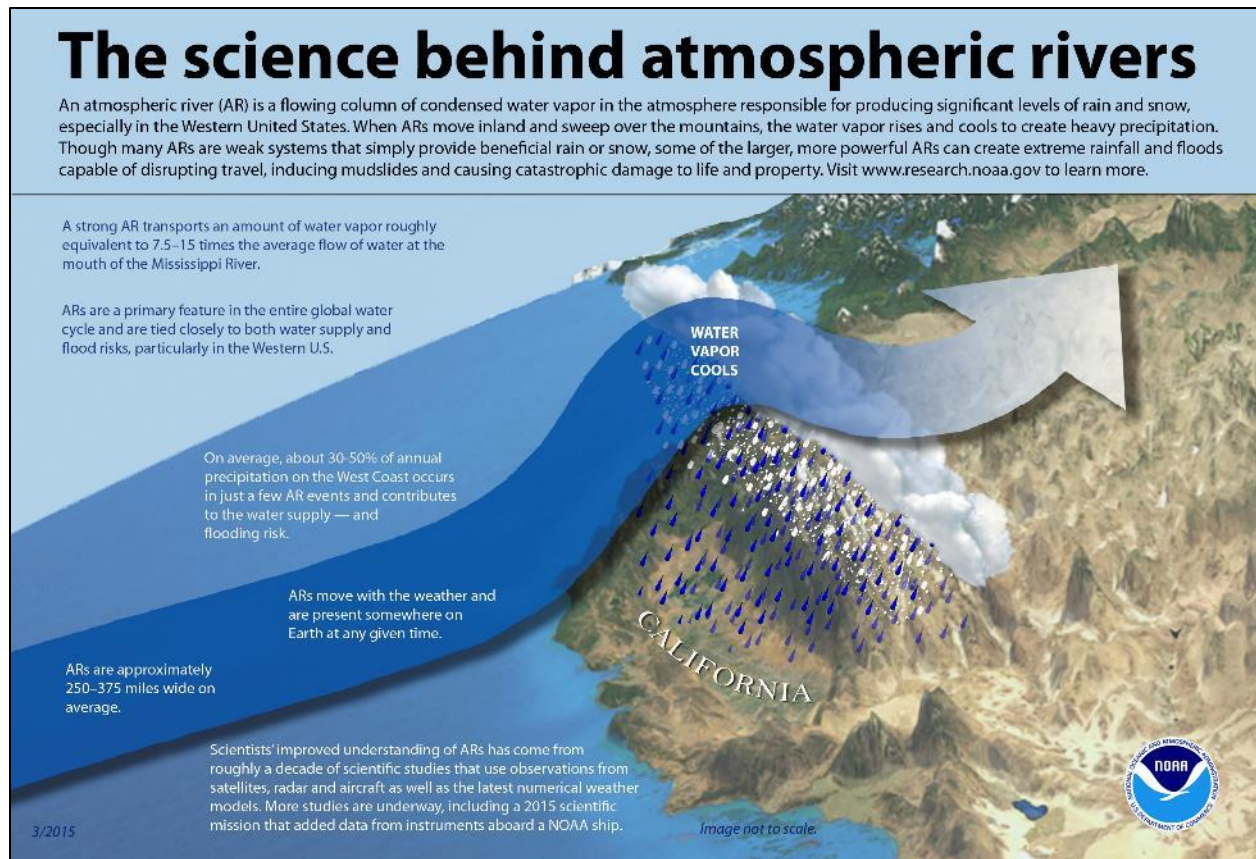
Atmospheric Rivers

According to the National Oceanic and Atmospheric Administration (NOAA), atmospheric rivers are relatively long, narrow regions in the atmosphere – like rivers in the sky – that transport most of the water vapor outside of the tropics. These columns of vapor move with the weather, carrying an amount of water vapor roughly equivalent to the average flow of water at the mouth of the Mississippi River. When the atmospheric rivers make landfall, they often release this water vapor in the form of rain or snow.



Although atmospheric rivers come in many shapes and sizes, those that contain the largest amounts of water vapor and the strongest winds can create extreme rainfall and floods, often by stalling over watersheds vulnerable to flooding. These events can disrupt travel, induce mudslides, and cause catastrophic damage to life and property. A well-known example is the "Pineapple Express," a strong atmospheric river that can bring moisture from the tropics near Hawaii over to the U.S. West Coast.

Graphic: Atmospheric Rivers
 (Source: National Oceanic and Atmospheric Administration)



While atmospheric rivers are responsible for great quantities of rain that can produce flooding, they also contribute to beneficial increases in snowpack. A series of atmospheric rivers fueled the strong winter storms that battered the U.S. West Coast from western Washington to southern California from December 10–22, 2010, producing 11 to 25 inches of rain in certain areas. These rivers also contributed to the snowpack in the Sierras, which received 75 percent of its annual snow by December 22, the first full day of winter.

NOAA research (e.g., NOAA Hydrometeorological Testbed and Cal Water) uses satellite, radar, aircraft and other observations, as well as major numerical weather model improvements, to better understand atmospheric rivers and their importance to both weather and climate.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3a.

Q: Is there a description of each hazard's **impacts** on each jurisdiction (what happens to structures, infrastructure, people, environment, etc.)? (Requirement §201.6(c)(2)(ii))

A: See **Impact of Flooding in the Project Area** below.

Impact of Flooding in the Project Area

Floods and their impacts vary by location and severity of any given flood event, and likely only affect certain areas of the region during specific times. Based on the risk assessment, it is evident that floods will continue to have potentially devastating economic impacts to the Project Area facilities. Impacts that are not quantified, but anticipated in future events include:

- ✓ Injury and loss of life
- ✓ Commercial and residential structural damage
- ✓ Disruption of and damage to public infrastructure
- ✓ Secondary health hazards e.g. mold and mildew
- ✓ Damage to roads/bridges resulting in loss of mobility
- ✓ Significant economic impact (jobs, sales, tax revenue) upon the community
- ✓ Negative impact on commercial and residential property values
- ✓ Significant disruption to students and teachers as temporary facilities and relocations would likely be needed

Issues Relating to Flooding

The following information is drawn from the 2021 Sonoma County Multijurisdictional Hazard Mitigation Plan.

- ✓ Structures in the planning area built before any regulations existed on floodplain development may be particularly vulnerable to the flood hazard.
- ✓ The accuracy of the existing flood hazard mapping produced by FEMA in reflecting the true flood risk within the planning area is questionable, especially along the Russian River.
- ✓ The extent of the flood-protection currently provided by flood control facilities (dams, dikes and levees) is not known due to the lack of an established national policy on flood protection standards.
- ✓ Older levees are subject to failure or do not meet current building practices for flood protection.
- ✓ The risk associated with the flood hazard overlaps the risk associated with other hazards such as earthquake, landslide, and severe weather. This provides an opportunity to seek mitigation alternatives with multiple objectives that can reduce risk for multiple hazards.
- ✓ There is no area-wide degree of consistency in land-use and floodplain management practices.
- ✓ Climate change may cause more extensive flood problems due to possible sea level rise and more severe weather patterns. The 0.2 percent-annual-chance floodplain inundation area may become a higher probability risk. Coastal flood hazard ratings may also need to be reviewed.
- ✓ More information is needed on flood risk to support the concept of risk-based analysis of capital projects.

- ✓ There needs to be a sustained effort to gather historical damage data, such as high-water marks on structures and damage reports, to measure the cost-effectiveness of future mitigation projects.
- ✓ Ongoing flood hazard mitigation will require funding from multiple sources.
- ✓ Coordinated hazard mitigation efforts among jurisdictions affected by flood hazards in the county are recommended.
- ✓ Floodplain residents should continue to be educated about flood preparedness and the resources available during and after floods.
- ✓ The concept of residual risk should be considered in the design of future capital flood control projects and should be communicated with residents living in the floodplain.
- ✓ The promotion of flood insurance as a means of protecting private property owners from the economic impacts of frequent flood events should continue.
- ✓ The economy affects a jurisdiction's ability to manage its floodplains. Budget cuts and personnel losses can strain resources needed to support floodplain management.
- ✓ Sonoma County is the State of California largest "repetitive loss" community. Challenges in the acquisition of repetitive loss data from FEMA have made it difficult to acquire data necessary to study the repetitive flood loss problem in depth.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

Q: Is there a description of each identified hazard's overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Summary of Vulnerability to Flooding** below.

Summary of Vulnerability to Flooding

The following is a summary of vulnerability to flooding for SCOE-owned properties. Headwaters Academy in Petaluma and Sonoma Community Center (SE) are the properties vulnerable to direct impacts from flooding including a total of approximately 25 occupants, 2 buildings, and property/contents valued at \$8.6 million. These estimates are based on 2023 data.

Floods have been a part of the County's historical past and will continue to be so in the future. During winter months, long periods of precipitation and the timing of that precipitation are critical in determining the threat of flood, and these characteristics further dictate the potential for widespread structural and property damage. Predominantly, the effects of flooding are generally confined to areas near the waterways of the County. As waterways grow in size from local drainages, so grows the threat of flood and dimensions of the threat. This threatens structures in the floodplain. Structures can also be damaged from trees falling as a result of water-saturated soil. Electrical power outages happen, and the interruption of power causes major problems. Loss of power is usually a precursor to closure of schools. The SCOE may be required to close or be placed on a delayed start schedule. Roads that transport students and staff can be damaged and closed, causing safety and evacuation issues. People may be swept away in floodwater, causing injuries or deaths.

Equally troubling are urban or localized flooding events. Primary concerns associated with stormwater flooding include impacts to infrastructure that provides a means of ingress and egress throughout the SCOE, as well as damage to SCOE facilities and property. Ground saturation can result in instability, collapse, or other damage to trees, structures, roadways, and other critical

infrastructure. Floodwater can break utility lines and interrupt services. Standing water can cause damage to roads used to transport staff and students and can also damage school foundations.

Landslide Hazards

Hazard Definition

A landslide is defined as the movement of a mass of rock, debris, or earth movement down a slope. Landslides are a type of “mass wasting” which denotes any down slope movement of soil and rock under the direct influence of gravity. The term “landslide” encompasses events such as rock falls, topples, slides, spreads, and flows. Landslides are initiated by rainfall, earthquakes, volcanic activity, changes in groundwater, disturbance and change of a slope by human-caused construction activities, or any combination of these factors. Landslides also occur underwater, causing tidal waves and damage to coastal areas. These landslides are called submarine landslides.



Landslide Characteristics

Landslides are a serious geologic hazard in almost every state in America. Nationally, landslides cause 25 to 50 deaths each year. The best estimate of direct and indirect costs of landslide damage in the United States range between \$1 and \$2 billion annually. As a seismically active region, California has a significant number of locations impacted by landslides. Some landslides result in private property damage, other landslides impact transportation corridors, fuel and energy conduits, and communication facilities. They can also pose a serious threat to human life.

Landslides can be broken down into two categories: 1) rapidly moving (generally known as debris flows), and; 2) slow moving. Rapidly moving landslides or debris flows present the greatest risk to human life, and people living in or traveling through areas prone to rapidly moving landslides,



are at increased risk of serious injury. Slow moving landslides can cause significant property damage but are less likely to result in serious human injuries.

The primary effects of mudslides/landslides include abrupt depression and lateral displacement of hillside surfaces over distances of up to several hundreds of feet, disruption of surface drainage, blockage of flood control channels and roadways, displacement or destruction of improvements such as roadways, buildings, and water wells.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2a.

Q: Does the plan include information on **previous occurrences** of hazard events for each jurisdiction?
(Requirement §201.6(c)(2)(i))

A: See **Previous Occurrences of Landslides in the Project Area** below.

Previous Occurrences of Landslides in the Project Area

According to Sonoma County Multijurisdictional Hazard Mitigation Plan (2021), the winters of 1982, 1983, 1986, 1998, and 2006 produced significant landslides in Sonoma County.

The most recent and most destructive mass movements in Sonoma County occurred in April 2006. Persistent heavy rainfall caused a massive number of landslides across the Sonoma and Marin County valleys area during the first half of April. About \$20 million of damage was done to agriculture, with over \$9 million spent on road repair damage in Sonoma County alone. Over \$5 million worth of damage was done to single family dwellings in Sonoma - with lesser (but still substantial) amounts of damage experienced to businesses and public buildings. In Marin County the hardest hit areas were Mill Valley, Fairfax, and San Rafael. In Mill Valley, a man was killed after he was buried in a mudslide in his backyard.

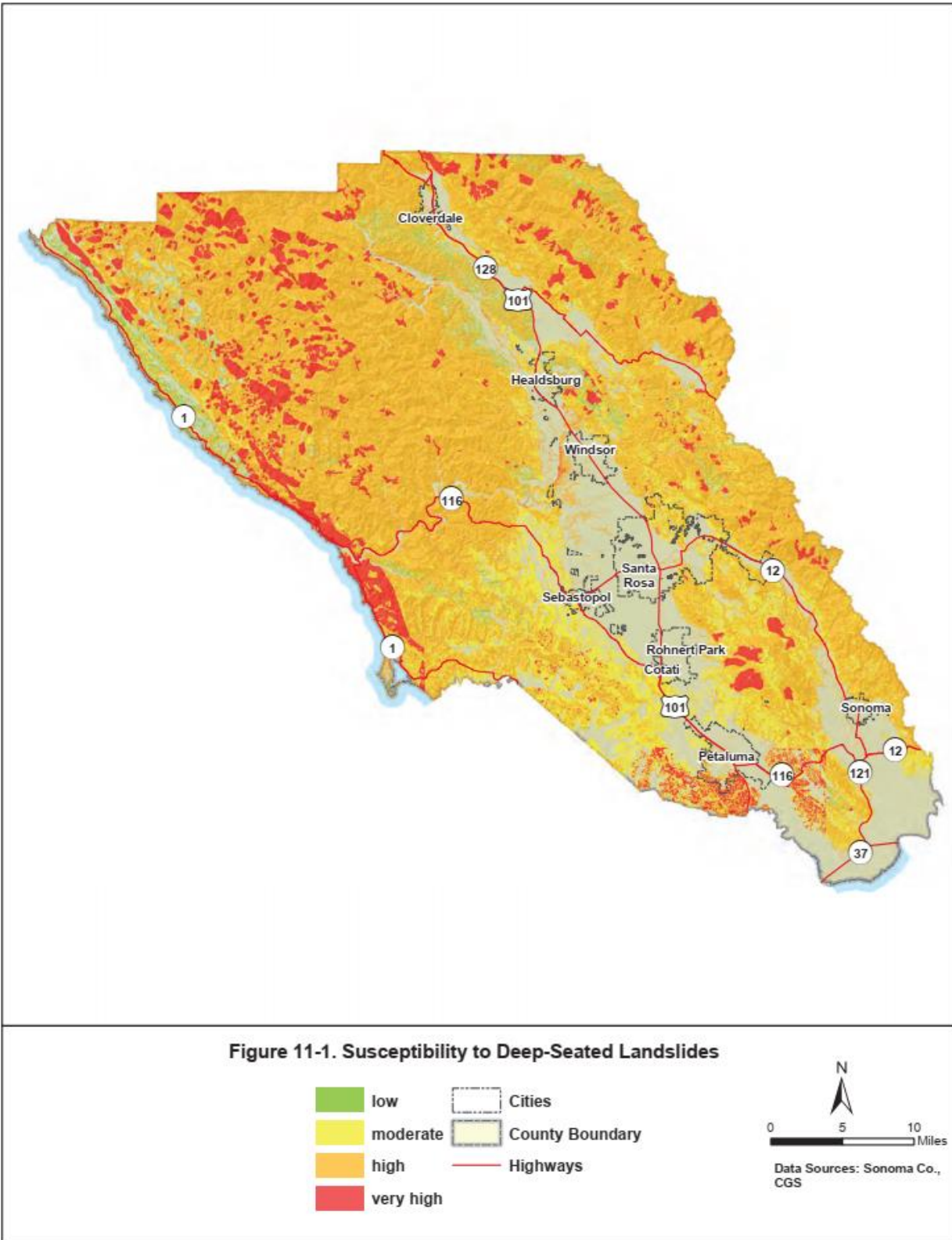
The most extreme case occurred during the El Nino Winter Storms in January 1998. Landslides caused an estimated \$21 million in damage at seven major locations as shown on **Map: Susceptibility to Deep-Seated Landslides**. The three most heavily damaged communities were: (1) Rio Nido, (2) Hidden Acres, and (3) Gold Ridge.

Specifically, in Rio Nido, two large debris flow failures traveled approximately 1,500 feet down a narrow ravine causing the destruction of three homes and damaging four others in Upper Canyon Three. The road and all underground and above-ground utilities were destroyed. The threat of further slippage of the main slide and resulting debris-flow activity forced the evacuation of 140 homes downslope from the slide. Residents were evacuated until the stability of the slides could be determined. Geologic studies were performed, and movement of the slides monitored for years. Evacuation zones maps were periodically revised, and residents gradually permitted to return to some areas.

Other damaging slides occurred in the communities of Monte Rio, Gold Ridge, Hidden Acres, Blucher Valley, Fitch Mountain, and the coastal community of Gleason's Beach.



Map: Susceptibility to Deep-Seated Landslides
 (Source: Sonoma County Multijurisdictional Hazard Mitigation Plan 2021)



Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1a.

Q: Does the plan include a general **description** of all natural hazards that can affect each jurisdiction? (Requirement §201.6(c)(2)(i))

A: See **Local Conditions** below.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

Q: Is there a description of each identified hazard’s overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Local Conditions** below.

Local Conditions

Landslides are a significant tertiary hazard prevalent throughout the region, however they pose a relatively small danger to the Project Area for several reasons. Landslides tend to be localized and only a small portion, less than 10 percent of the high landslide hazard area has been urbanized.

The landslide hazard map below indicates areas of high and low landslide potential based on slope and earth materials; however, the risk of landslide would increase if these areas are subject to either strong earthquake shaking or ground saturation. Landslide risks increase significantly when rainfall saturates soil on steep slopes, triggering mud or debris flows.

In the Project Area, historic landslides are the best indicator of where landslides may occur in the future, unless the conditions that contributed to the prior landslide have been mitigated. Current Sonoma County codes prohibits construction of new structures on known landslide areas. However, existing developments with history of damaging landslides, remain at risk from future events.



Project Area Schools

There are public schools and three public school office buildings in areas that are potentially at risk of landslides. Site specific investigations have not been conducted on individual buildings and actual risk is not known. See **Table: Critical Facilities Vulnerable to Hazards** for specific sites affected.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3a.

Q: Is there a description of each hazard's **impacts** on each jurisdiction (what happens to structures, infrastructure, people, environment, etc.)? (Requirement §201.6(c)(2)(ii))

A: See **Impacts of Landslides in the Project Area** below.

Impacts of Landslides in the Project Area

Based on the risk assessment, it is evident that landslides will continue to have potentially devastating economic impacts to the Project Area facilities. Impacts that are not quantified, but can be anticipated in future events, include:

- ✓ Injury and loss of life,
- ✓ Commercial and residential structural damage,
- ✓ Disruption of and damage to public infrastructure,
- ✓ Secondary health hazards e.g., mold and mildew,
- ✓ Damage to roads/bridges resulting in loss of mobility,
- ✓ Significant economic impact (jobs, sales, tax revenue) upon the community,
- ✓ Negative impact on commercial and residential property values, and
- ✓ Significant disruption to students and teachers as temporary facilities and relocations would likely be needed.

Issues Relating to Landslides

The following information is drawn from the 2021 Sonoma County Multijurisdictional Hazard Mitigation Plan.

Important issues associated with landslides in the planning area include the following:

- ✓ An accurate picture of where landslides occurred during previous storms is vital in making intelligent land use planning and mitigation decisions.
- ✓ Landslides may result in isolation of neighborhoods and communities, due to the fact that large portions of the transportation infrastructure are in areas of high and moderate slope instability. Isolation may result in food shortages, loss of power, and severely reduced economic productivity.
- ✓ There are critical facilities in areas of unstable slopes that could result in interruption to utility services, particularly water and power. This creates a need for mitigation and for continuity of operations planning to develop procedures for providing services without access to essential facilities.
- ✓ Landslides may result in loss of water quality to the environment and for drinking purposes, due to increased sediment delivery into surface waterways.
- ✓ There are existing homes in landslide hazard areas throughout the planning area. The degree of vulnerability of these structures depends on the codes and standards the structures were constructed to. Information to this level of detail is not currently available.
- ✓ The impact of climate change on landslides is uncertain. If climate change impacts the timing and intensity of rain event, then the frequency of landslide events may increase.
- ✓ The risk associated with the landslide hazard overlaps the risk associated with other hazards such as earthquake, flood, and wildfire. This provides an opportunity to seek mitigation alternatives with multiple objectives that can reduce risk for multiple hazards.

- ✓ California’s Disclosures in Real Property Transactions law requires disclosure if a property is in a landslide hazard area. Such disclosure is dependent upon knowledge by the seller or the seller’s real estate agent or the posting of a landslide hazard map at the offices of the County recorder, County assessor, and County planning agency and a notice identifying the location of the map and any changes to it.
- ✓ Future development could lead to more homes in landslide risk areas.
- ✓ Mapping and assessment of landslide hazards are constantly evolving. As new data and science become available, assessments of landslide risk should be reevaluated.
- ✓ Coastal bluff erosion is particularly susceptible to ocean wave height and the direction of wave approach. El Niño conditions often result in substantial increases of coastal bluff retreat. Roads and residential developments are most exposed to these hazards.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

Q: Is there a description of each identified hazard’s overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Summary of Vulnerability to Landslides** below.

Summary of Vulnerability to Landslides

None of the SCOE properties are vulnerable to the impacts of landslides, however four participating districts including Fort Ross, Guerneville, Healdsburg, and Montgomery are vulnerable to landslides.

Although landslides are primarily associated with slopes greater than 15 percent, they can also occur in relatively flat areas and as cut-and-fill failures, river bluff failures, lateral spreading landslides, failures associated with quarries, and open-pit mines, as well as within post-fire areas. Landslides may be triggered by both natural- and human-caused activity. In the vulnerable participating districts, landslides could cause damage to schools, as well as cause transportation issues that may affect one or more sites in the participating districts. This would affect both facilities and enrolled students. Utilities may be impacted, which could cut power or water to the participating district facilities. In some instances, injuries and deaths of students and staff could occur.

Tsunami Hazards

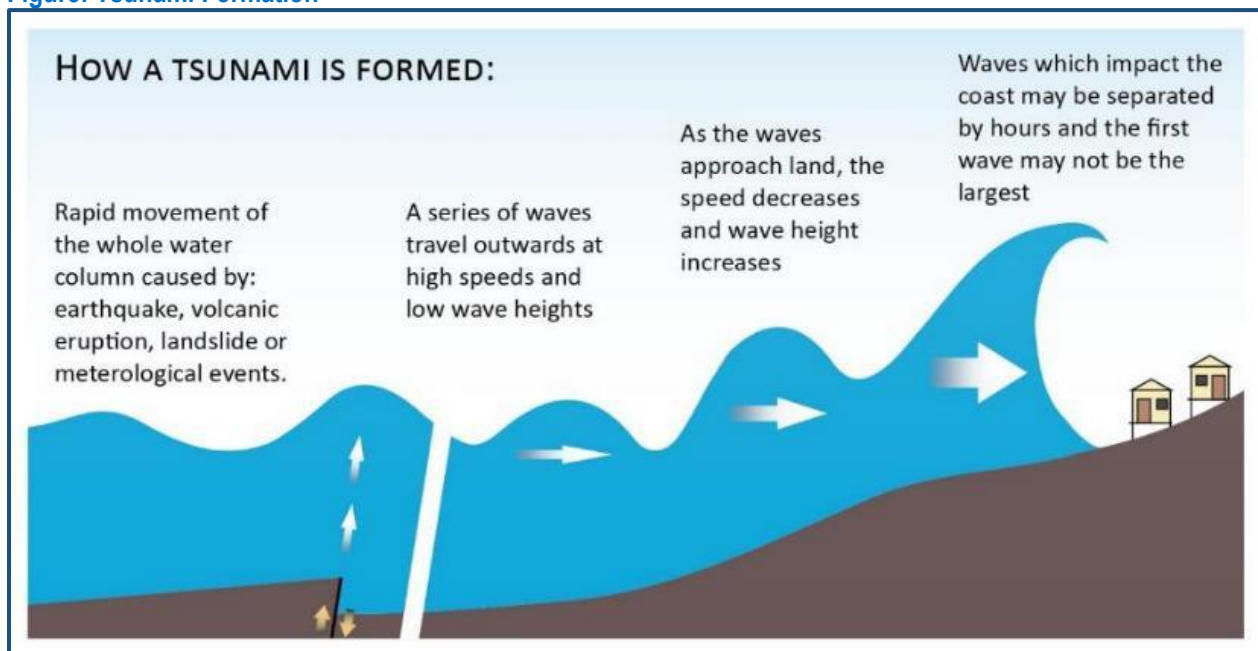
Hazard Definition

The phenomenon we call “tsunami” (soo-NAH-mee) is a series of traveling ocean waves of extremely long length generated primarily by earthquakes occurring below or near the ocean floor. Underwater volcanic eruptions and landslides can also generate tsunamis. In the deep ocean, the tsunami waves move with a speed exceeding 500 miles per hour, and a wave height of only a few inches. Tsunami waves are distinguished from ordinary ocean waves by their great length between wave crests, often exceeding 60 miles or more in the deep ocean, and by the time between these crests, ranging from 10 minutes to an hour.

As they reach the shallow waters of the coast, the waves slow down and the water can pile up into a wall of destruction up to 30 feet or more in height. The effect can be amplified where a bay, harbor or lagoon funnels the wave as it moves inland. Large tsunamis have been known to rise over 100 feet. Even a tsunami 1-3 feet high can inflict destructive damage and cause many deaths and injuries.



Figure: Tsunami Formation



Earthquakes and Tsunamis

An earthquake can be caused by volcanic activity, but most are generated by movements along fault zones associated with the plate boundaries. Most strong earthquakes, representing 80% of the total energy released worldwide by earthquakes, occur in subduction zones where an oceanic plate slides under a continental plate or another younger oceanic plate.



Not all earthquakes generate tsunamis. To generate a tsunami, the fault where the earthquake occurs must be underneath or near the ocean and cause vertical movement of the sea floor over a large area, hundreds or thousands of square miles. “By far, the most destructive tsunamis are generated from large, shallow earthquakes with an epicenter or fault line near or on the ocean floor.” The amount of vertical and horizontal motion of the sea floor, the area over which it occurs, the simultaneous occurrence of slumping of underwater sediments due to the shaking, and the efficiency with which energy is transferred from the earth’s crust to the ocean water are all part of the tsunami generation mechanism. The sudden vertical displacements over such large areas disturb the ocean’s surface, displace water, and generate destructive tsunami waves.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2a.

Q: Does the plan include information on **previous occurrences** of hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

A: See **Previous Occurrences of Tsunamis in the Project Area** below.

Previous Occurrences of Tsunamis in the Project Area



Fortunately, the Project Area has never been impacted by a major tsunami event. The most recent tsunami warning occurred in March 2011. A magnitude 9.0 earthquake off the coast of Japan triggered a tsunami warning along the coast of Sonoma County. Although tsunami waves were only predicted to be an additional 2 feet, all Sonoma County coasts were closed, and coastal residents alerted. The tsunami warning did not cause any interruption to the Project Area.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1a.

Q: Does the plan include a general **description** of all natural hazards that can affect each jurisdiction? (Requirement §201.6(c)(2)(i))

A: See **Local Conditions** below.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

Q: Is there a description of each identified hazard’s overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Local Conditions** below.

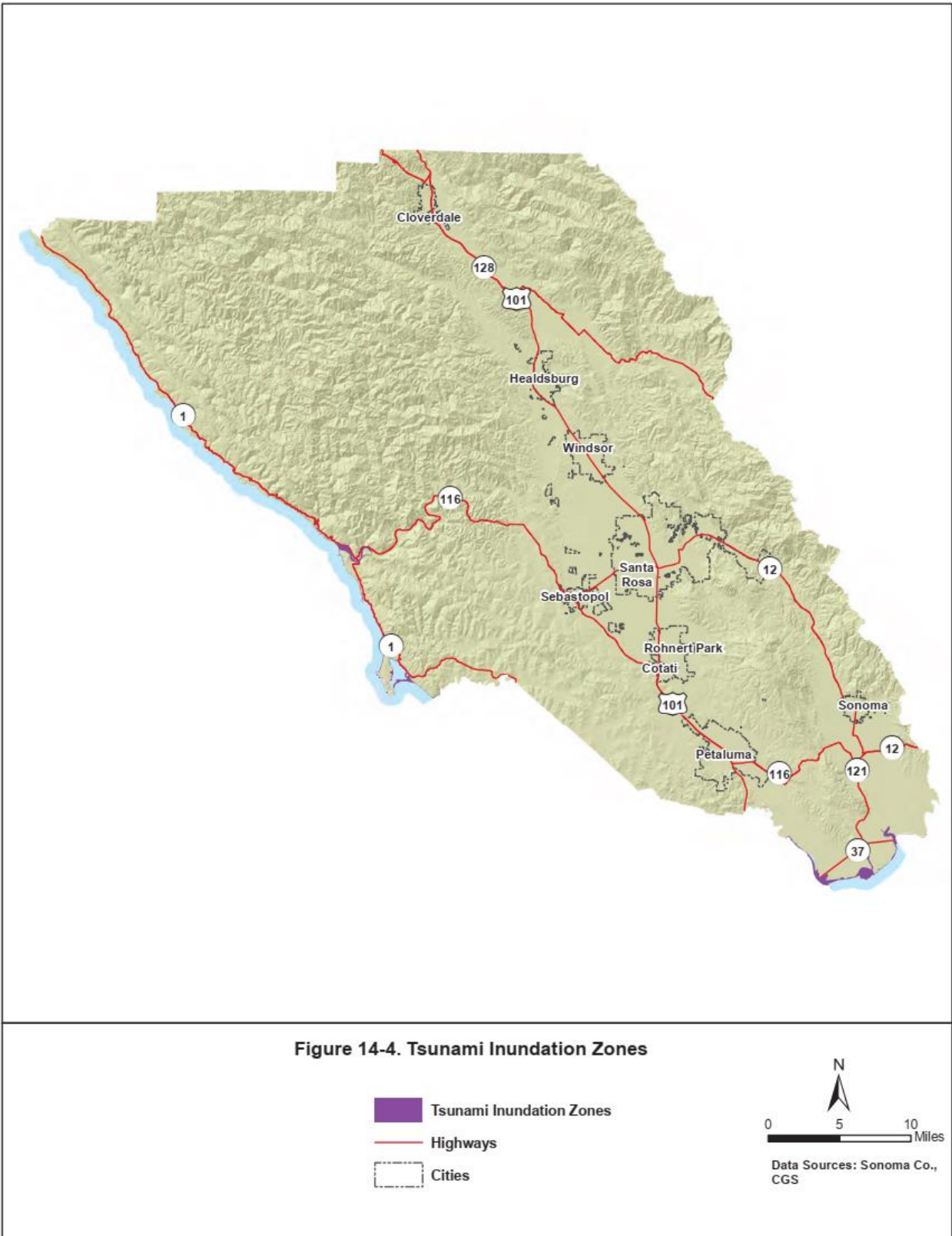
Local Conditions

The County of Sonoma was officially recognized as a Tsunami Ready community in March 2016 by National Weather Service representatives. This designation recognizes voluntary community programs that promote collaborative tsunami hazard preparedness efforts. In order to become a Tsunami Ready community, the County developed a local Tsunami Response Plan, mapped inundation areas along the coast, identified evacuation routes, established refuge areas, installed over 160 tsunami signs in the hazard zones, provided education to the public, deployed and maintained redundant and reliable means to disseminate tsunami warnings and participated in readiness exercises.

Sonoma County’s rugged cliffs and generally elevated coastline reduces its exposure and vulnerability to tsunamis. Areas with the greatest exposure to potential damage by a tsunami are the coastal communities along the southern Sonoma County coast from Jenner to Bodega Bay. Tsunami inundation maps for the Sonoma Coast area near Jenner, Bodega Bay, and the San Pablo Bay were released in 2009 and form the basis for the County’s Tsunami Response Plan.

As indicated on the following map, areas of tsunami danger within Sonoma are limited to those with coastal exposure, namely in Archer Rock, Duncans Mills, Bodega Head, Valley Ford, Petaluma River, Sears Point, Cuttings Wharf, Petaluma Point, Mare Island, and Novato. Although there are multiple communities within tsunami inundation areas, SCOE facilities do not have coastal exposure and therefore are not anticipated to be directly affected by tsunamis. However, the Planning Team recognizes that the indirect impacts could be significant given the need for their facilities to be involved in host shelters and sharing of resources.

Map: Tsunami Inundation Zones
 (Source: Sonoma County Multijurisdictional Hazard Mitigation Plan 2021)



Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3a.

Q: Is there a description of each hazard’s **impacts** on each jurisdiction (what happens to structures, infrastructure, people, environment, etc.)? (Requirement §201.6(c)(2)(ii))

A: See **Impact of Tsunamis in the Project Area** below.

Impact of Tsunamis in the Project Area

Based on the risk assessment, it is evident that tsunamis will continue to threaten the coastline of the Project Area. Impacts that are not quantified, but can be anticipated in future events, include:

- ✓ Injury and loss of life,
- ✓ Commercial and residential structural damage,
- ✓ Disruption of and damage to public infrastructure,
- ✓ Secondary health hazards e.g., mold and mildew,
- ✓ Damage to roads/bridges resulting in loss of mobility,
- ✓ Significant economic impact (jobs, sales, tax revenue) upon the community,
- ✓ Negative impact on commercial and residential property values, and
- ✓ Significant disruption to students and teachers as temporary facilities and relocations would likely be needed.

Issues Relating to Tsunamis

The following information is drawn from the 2021 Sonoma County Multijurisdictional Hazard Mitigation Plan.

Although there are no SCOE or District facilities threatened by tsunami. For the sake of awareness, the following information is offered for the overall County:

Important issues associated with a tsunami in the Project Area include the following:

- ✓ Many structures may not be designed to resist tsunami forces.
- ✓ Present building codes and guidelines do not adequately address the impacts of tsunamis on structures. It is anticipated that future updates to the California Building Code (and Field Act) will include amendments that address these issues.
- ✓ As tsunami warning technologies evolve, the tsunami warning capability within the Project Area will need to be enhanced to provide the highest degree of warning to planning partners with tsunami risk exposure.
- ✓ With the future impacts from climate change, the issue of sea level rise may become an important consideration as probable tsunami inundation areas are identified through future studies.
- ✓ Special attention will be focused on vulnerable communities and tourists in the tsunami zone and on hazard mitigation through public education and outreach.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

Q: Is there a description of each identified hazard’s overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Summary of Vulnerability to Tsunamis** below.

Summary of Vulnerability to Tsunamis

None of the SCOE or District facilities or associated infrastructure are vulnerable to tsunami. However, it is certainly possible that any of the SCOE facilities could be indirectly impacted or be designated as possible shelters for community members in need of a temporary facility.

A tsunami is a series of great waves that are created by undersea disturbances, such as earthquakes or volcanic eruptions. As opposed to typical waves that crash at the shoreline, tsunamis bring a continuously flowing “wall of water” that has the potential to cause devastating damage in coastal areas immediately along the shore. Areas at greatest risk are less than 50 feet above sea level and within 1 mile of the shoreline. Most deaths that occur during a tsunami result from drowning. Associated risks include flooding, polluted water supplies, and damaged gas lines.

Utility Related Hazards

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2a.

Q: Does the plan include information on **previous occurrences** of hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

A: See **Previous Occurrences of Utility Related Hazards in the Project Area** below.

Previous Occurrences of Utility Related Hazards in the Project Area

Power Failure/Stoppages

Pacific Gas and Electric (PG&E) provides utility service to the Project Area. There have been brief power failures and deliberate outages as recent as October 2019 with impacts to 87,000 homes and businesses. If severe weather threatens a portion of the electric system, it may be necessary for PG&E to turn off electricity in the interest of public safety. Known as the Public Safety Power Shutoff program (PSPS), it was most recently activated during the Kincadee Wildfire. *Note: any utility service-related wildfires are discussed in the Wildfire Hazards Section.*



Drought/Water Shortages

The majority of impacts relating to drought to the Project Area result from distribution shortages that are regulated by utility providers. See **Local Conditions – Chart: 5-Year Drought History** below for historical information regarding drought in the Project Area.

Natural Gas Pipelines

There have been no pipeline incidents posing a significant threat to the Project Area.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1a.

Q: Does the plan include a general **description** of all natural hazards that can affect each jurisdiction? (Requirement §201.6(c)(2)(i))

A: See **Local Conditions** below.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

Q: Is there a description of each identified hazard's overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Local Conditions** below.

Local Conditions

Power Failure and Stoppages

Power failure is defined as any interruption or loss of electrical service caused by disruption of power transmission caused by accident, sabotage, natural hazards, or equipment failure (also

referred to as a loss of power or power outage). A significant power failure is defined as any incident of a long duration, which would require the involvement of the local and/or State emergency management organizations to coordinate provision of food, water, heating, cooling, and shelter. Power failures in the planning area are usually localized and are usually the result of a natural hazard event involving high winds or storms. Electricity throughout the project area is provided by Pacific Gas and Electric (PG&E).

The massive 2011 Southern California electricity outage brought to light many critical issues surrounding the state's power generation and distribution system, including its dependency on out-of-state resources. Although California has implemented effective energy conservation programs, the state continues to experience both population growth and weather cycles that contribute to a heavy demand for power.

Hydro-generation provides approximately 25% of California's electric power, with the balance coming from fossil fuels, nuclear, and green sources. As experienced in 2000 and 2001, blackouts can occur due to losses in transmission or generation and/or extremely severe temperatures that lead to heavy electric power consumption.

The effects of an energy shortage would affect all occupants of the project area. Perhaps most at risk would be medically challenged individuals with health care equipment reliant on electricity (e.g., oxygen), businesses, emergency service locations, and vulnerable population centers (e.g., schools).

In 2018, the California Public Utilities Commission (CPUC) directed California's three largest energy companies to coordinate to prepare all Californians for the threat of wildfires and power outages during times of extreme weather. To help protect customers and communities during extreme weather events, electric power may now be shut off for reasons of public safety. This new protocol is referred to as Public Safety Power Shutoff (PSPS).

Drought/Water Shortages

It's impossible to separate drought from water supply shortages. Drought is defined as a deficiency of precipitation over an extended period of time, usually a season or more. This deficiency results in a water shortage for some activity, group, or environmental sector. Drought should be considered relative to some long-term average condition of balance between precipitation and evapotranspiration (i.e., evaporation + transpiration) in a particular area, a condition often perceived as "normal". It is also related to the timing (e.g., principal season of occurrence, delays in the start of the rainy season, occurrence of rains in relation to principal crop growth stages) and the effectiveness of the rains (e.g., rainfall intensity, number of rainfall events).

Other climatic factors such as high temperature, high wind, and low relative humidity are often associated with it in many regions of the world and can significantly aggravate its severity. Drought should not be viewed as merely a physical phenomenon or natural event. Its impacts on society result from the interplay between a natural event (less precipitation than expected resulting from natural climatic variability) and the demand people place on water supply. Human beings often exacerbate the impact of drought. Recent droughts in both developing and developed countries and the resulting economic and environmental impacts and personal hardships have underscored the vulnerability of all societies to this natural hazard.

One dry year does not normally constitute a drought in California but serves as a reminder of the need to plan for droughts. California's extensive system of water supply infrastructure — its

reservoirs, groundwater basins, and inter-regional conveyance facilities — mitigates the effect of short-term dry periods for most water users. Defining when a drought begins is a function of drought impacts to water users. Hydrologic conditions constituting a drought for water users in one location may not constitute a drought for water users elsewhere, or for water users having a different water supply. Individual water suppliers may use criteria such as rainfall/runoff, amount of water in storage, or expected supply from a water wholesaler to define their water supply conditions.

Drought is a gradual phenomenon. Although droughts are sometimes characterized as emergencies, they differ from typical emergency events. Most natural disasters, such as floods or forest fires, occur relatively rapidly and afford little time for preparing for disaster response. Droughts occur slowly, over a multiyear period. There is no universal definition of when a drought begins or ends. Impacts of drought are typically felt first by those most reliant on annual rainfall - ranchers engaged in dry land grazing, rural residents relying on wells in low-yield rock formations, or small water systems lacking a reliable source. Criteria used to identify statewide drought conditions do not address these localized impacts. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline.



There are four different ways that drought can be defined:

- **Meteorological** - a measure of departure of precipitation from normal. Due to climatic differences, what is considered a drought in one location may not be a drought in another location.
- **Agricultural** - refers to a situation when the amount of moisture in the soil no longer meets the needs of a particular crop.
- **Hydrological** - occurs when surface and subsurface water supplies are below normal.
- **Socioeconomic** - refers to the situation that occurs when physical water shortage begins to affect people.

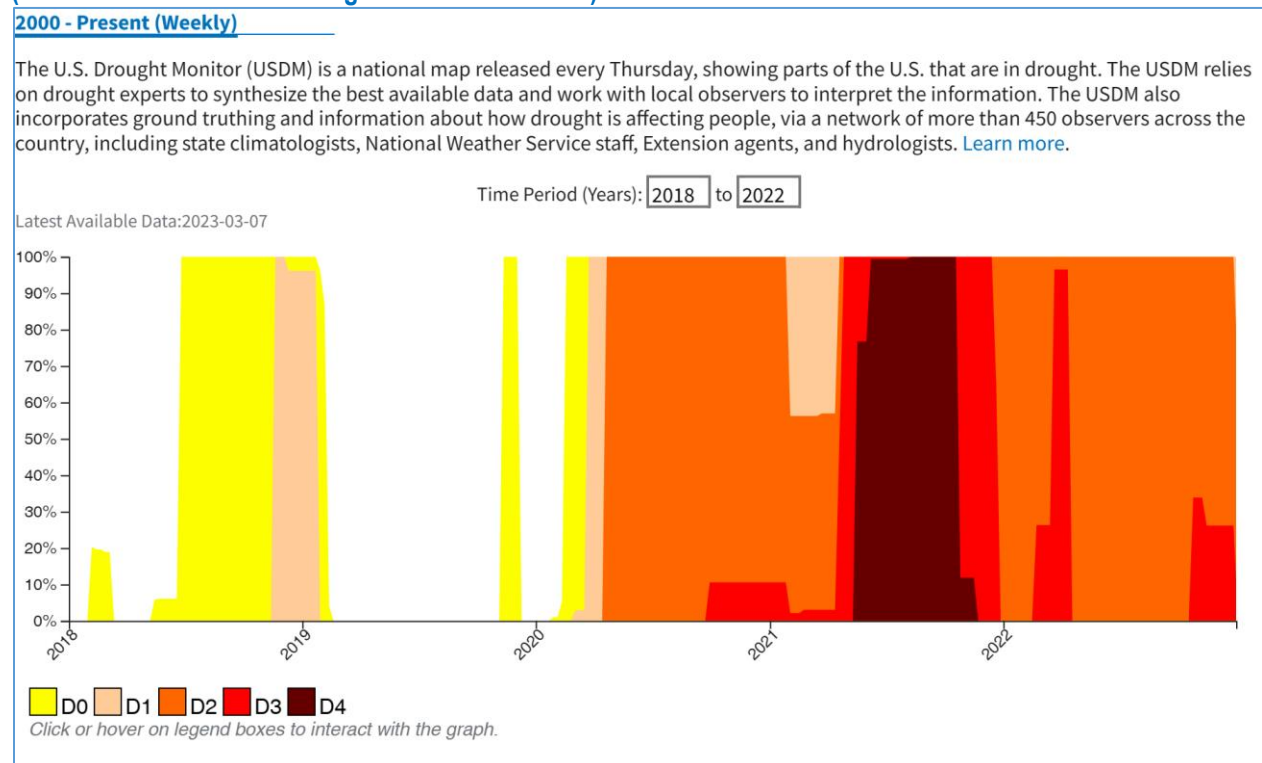
The U.S. Drought Monitor (USDM) is a map that is updated weekly to show the location and intensity of drought across the country. The USDM uses a five-category system (USDM, 2021):

- **D0—Abnormally Dry**
 - Short-term dryness slowing planting, growth of crops
 - Some lingering water deficits
 - Pastures or crops not fully recovered
- **D1—Moderate Drought**
 - Some damage to crops, pastures

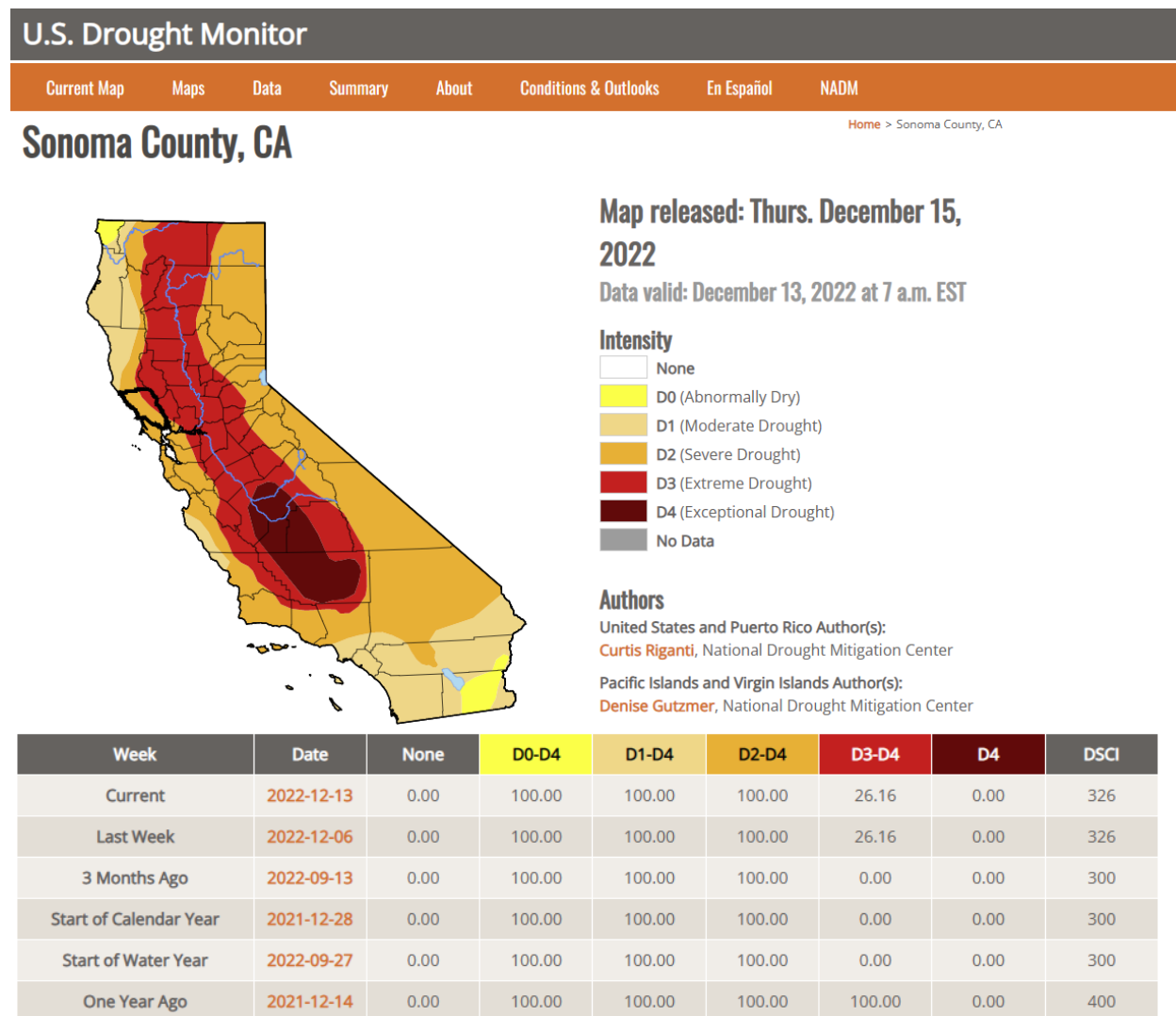
- Some water shortages developing
- Voluntary water-use restrictions requested
- D2—Severe Drought
 - Crop or pasture loss likely
 - Water shortages common
 - Water restrictions imposed
- D3—Extreme Drought
 - Major crop/pasture losses
 - Widespread water shortages or restrictions
- D4—Exceptional Drought
 - Exceptional and widespread crop/pasture losses
 - Shortages of water creating water emergencies

The USDM categories show experts' assessments of conditions related to drought. These experts check variables including temperature, soil moisture, stream flow, water levels in reservoirs and lakes, snow cover, and meltwater runoff. They also check whether areas are showing drought impacts such as water shortages and business interruptions. Associated statistics show what proportion of various geographic areas are in each category of dryness or drought, and how many people are affected. U.S. Drought Monitor data go back to 2000.

Chart: 5-Year Drought History - Sonoma County, California
(Source: Website – U.S. Drought Monitor 3.10.2023)



U.S. Drought Monitor – Sonoma County, California
(Source: Website – U.S. Drought Monitor 12.15.2022)



Additionally, the long-term effects of climate change on regional water resources are unknown, but global water resources are already stressed without climate change. Current stresses on water resources include:

- Growing populations
- Increased competition for available water
- Poor water quality
- Environmental claims
- Uncertain reserved water rights
- Groundwater overdraft
- Aging urban water infrastructure

With a warmer climate, droughts could become more frequent, more severe, and longer lasting. The drought of the late 1980s showed what the impacts might be if climate change leads to a change in the frequency and intensity of droughts across the United States. From 1987 to 1989, losses from drought in the United States totaled \$39 billion (OTA, 1993). More frequent extreme events such as droughts and floods could end up being more cause for concern than the long-term change in temperature and precipitation averages.

Natural Gas Pipelines

There are several major natural gas pipelines that traverse the planning area as shown on **Map: California Natural Gas Utility Service Area**. While pipelines are often thought of as presenting risks to communities, natural hazards can impact the integrity of pipelines. According to the U.S. Department of Transportation, although natural hazards are cited as the cause in fewer than ten percent (10%) of pipeline incidents, the failure of a large-diameter, high-pressure natural gas or hazardous liquid transmission pipeline during an earthquake can significantly complicate a communities' ability to respond and recover from the event. Natural gas is supplied to the planning area by Pacific Gas & Electric (PG&E).

On September 9, 2010, a 30-inch steel natural gas transmission pipeline owned and operated by PG&E ruptured and exploded in the City of San Bruno residential neighborhood. The blast and ensuing inferno resulted in 8 confirmed deaths, 66 reported injuries, 34 destroyed structures, and 8 damaged structures. Cal OES has identified preliminary damage estimates at \$15.4 million, including \$2.5 million for debris removal, \$10.2 million for protective measures, \$2.1 million for roads and bridges, and \$0.6 million for utilities and other facilities. Investigations into the cause of the explosion are under way by the National Safety Transportation Board (NSTB), the California Public Utilities Commission (CPUC), and PG&E. Although it will not be confirmed until official investigations are completed, initial speculation points to the weakening of the 60-year-old pipeline due to corrosion. The day after the explosion, the CPUC asked PG&E to provide a list of its top 100 high-priority projects to upgrade or replace portions of the pipeline for reasons of public safety, as well as information on the status of listed projects. The list was published on September 21, 2010. Although targeted for repair several years ago, the San Bruno pipeline was not on the list.

Virtually all natural gas, which accounts for about 28 percent of energy consumed annually, is transported by transmission pipelines. Although California is a leader in exploring and implementing alternative energy sources such as wind and solar, the expansion of traditional energy sources, such as natural gas, continues. There are natural gas transmission pipelines within the Project Area, as well as adjoining communities.

Map: California Natural Gas Utility Service Area (Source: California Energy Commission, Date: 2020)



Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3a.

Q: Is there a description of each hazard's **impacts** on each jurisdiction (what happens to structures, infrastructure, people, environment, etc.)? (Requirement §201.6(c)(2)(ii))

A: See **Impact of Utility Related Hazards in the Project Area** below.

Impacts of Utility Related Hazards in the Project Area

Based on the risk assessment, it is evident that Utility-Related hazards will continue to have potentially devastating impacts to certain portions of the Project Area.

Impacts that are not quantified, but can be anticipated in future events, include:

- ✓ Injury and loss of life,
- ✓ Commercial and residential structural damage,
- ✓ Disruption of and damage to public infrastructure,
- ✓ Significant economic impact,
- ✓ Negative impact on commercial and residential property values, and
- ✓ Significant disruption to students and teachers as temporary facilities and relocations would likely be needed.

Issues Relating to Utility Related Hazards

Important issues associated with utility related events include the following:

- ✓ A large percentage of the Project Area could be impacted all at the same time which would significantly impact emergency services capabilities.
- ✓ In the event of a power outage, it may be necessary for the utility provider to assist certain properties with reactivation.
- ✓ In the event of an outage of natural gas or propane, the utility provider may be required to assist customers with reactivation.
- ✓ Transportation systems in the planning area after an outage has the potential to significantly disrupt response and recovery efforts and lead to isolation of populations.
- ✓ Results loss of heating and air conditioning systems can impact comfort and safety levels for building occupants.
- ✓ Infrastructure-related computer systems are vulnerable to power outages.
- ✓ Schools and other educational facilities would be expected to be self-sufficient during outages and may be compromised as to decreased services from government response agencies, utilities, private-sector services, and infrastructure components.
- ✓ Lack of refrigeration would impact storage of onsite medicines, food, and other supplies.
- ✓ The flow of goods and services could result due to impacts to major transportation infrastructure across the broader region.
- ✓ A power outage can compromise or damage communication systems, complicating efforts to coordinate response to the event.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

Q: Is there a description of each identified hazard’s overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Summary of Vulnerability to Utility Related** below.

Summary of Vulnerability to Utility Related

The following is a summary of vulnerability to utility related events. All of SCOE-owned properties would be impacted by a utility related event including SCOE’s Main Facility, Legal Facility, Overflow Parking Lot, Valley of the Moon, Juniper Shop Facility, CBI, Sonoma Valley – Sassari Elementary, Petaluma City – 4C’s McDowell Elementary, and SELPA Properties Lewis Opportunity School, Headwaters Academy, Sonoma Community Center (SE), and SCOE Alternative Education Properties Satellite Office Space, and Amarosa Academy including a total of approximately 325 occupants, 12 buildings, and property/contents valued at \$51 million. These estimates are based on 2023.

Public Safety Power Shutoff (PSPS) can be initiated by PG&E for a range of reasons including wildfire, high wind, severe weather, flooding, and earthquake. The power shutoffs are initiated in large areas within the County so property may not even be impacted by the initial event but still impacted by the power shutoff.

Drought is a much slower moving hazard. Severe reductions and shutoffs can take place following a broken water main or during major repairs. It is possible that water agencies could resort to restrictions rather than just fines.

Epidemic/Pandemic/Vector-Borne Disease Hazards

Hazard Definition

According to the California State Hazard Mitigation Plan (2018), the California Department of Public Health has identified epidemics, pandemics, and vector-borne diseases as specific hazards that would have a significant impact throughout the State.

According to the Centers for Disease Control (CDC), an epidemic refers to an increase, often sudden, in the number of cases of a disease above what is normally expected in that population area. A pandemic refers to an epidemic that has spread over several countries or continents, usually affecting a large number of people. Vector-borne diseases are human illnesses caused by parasites, viruses and bacteria that are transmitted by vectors – living organisms that can transmit infectious pathogens between humans, or from animals to humans.



Seasonal Influenza

Seasonal influenza, also known as the flu, is a disease that attacks the respiratory system (nose, throat, and lungs) in humans. Seasonal influenza occurs every year. In the U.S., the influenza season typically occurs from October through May, peaking in January or February with yearly epidemics of varying severity. Although mild cases may be similar to a viral “cold,” influenza is typically much more severe. Influenza usually comes on suddenly; may include fever, headache, tiredness (which may be extreme), dry cough, sore throat, nasal congestion, and body aches; and can result in complications such as pneumonia. Persons aged 65 and older, those with chronic health conditions, pregnant women, and young children are at the highest risk for serious complications, including death.

Pandemic Influenza

Pandemic influenza occurs when a new influenza virus, for which there is little or no human immunity, emerges and spreads on a worldwide scale, infecting a large proportion of the human population. The 20th century saw three such pandemics. The most notable pandemic was the 1918 Spanish influenza pandemic that was responsible for 20 million to 40 million deaths throughout the world. There have been two pandemics in the 21st century; H1N1 in 2009, and the most recent COVID-19 outbreak in 2019. As demonstrated historically and currently, pandemic influenza has the potential to cause serious illness and death among people of all age groups and have a major impact on society. These societal impacts include significant economic

disruption that can occur due to death, loss of employee work time, and costs of treating or preventing the spread of influenza.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B1a.

Q: Does the plan include a general description of all natural hazards that can affect each jurisdiction? (Requirement §201.6(c)(2)(i))

A: See **Local Conditions** below.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

Q: Is there a description of each identified hazard’s overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Local Conditions** below.

Local Conditions

H1N1 Influenza

In 2009 a pandemic of H1N1 influenza, popularly referred to as the swine flu, resulted in many hospitalizations and deaths. Pandemic H1N1 influenza is spread in the same way as seasonal influenza, from person to person through coughing or sneezing by infected people. In April 2009, two kids living more than 100 miles apart in Southern California came down with the flu. By mid-April, their illnesses had been diagnosed as being caused by a new strain of H1N1 influenza. Persons infected with H1N1 experienced fever and mild respiratory symptoms, such as coughing, runny nose, and congestion. In some cases, symptoms were severe and included diarrhea, chills, and vomiting, and in rare cases respiratory failure occurred. The H1N1 virus caused relatively few deaths in humans. In the United States, for example, it caused fewer deaths (between 8,870 and 18,300) than seasonal influenza, which, based on data for the years 2014–2019, causes an average of about 40,000 deaths each year. The H1N1 virus was most lethal in individuals affected by chronic disease or other underlying health conditions.

COVID-19

As of 2020, the CDC is responding to a pandemic of respiratory disease spreading from person to person caused by a novel (new) coronavirus. The disease has been named “Coronavirus Disease 2019” (abbreviated “COVID-19”). Coronaviruses are a large family of viruses that are common in people and many different species of animals, including camels, cattle, cats, and bats. Rarely, animal coronaviruses can infect people and then spread between people such as with Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS).

According to the CDC, many of the patients at the epicenter of the outbreak in Wuhan, Hubei Province, China had some link to a large seafood and live animal market, suggesting animal-to-person spread. Later, a growing number of patients reportedly did not have exposure to animal markets, indicating person-to-person spread. Person-to-person spread was subsequently reported outside Hubei and in countries outside China, including in the United States. Most international destinations now have ongoing community spread with the virus that causes COVID-19, as does the United States.

On March 4, 2020, Governor Newsom proclaimed a state of emergency for California in response to the COVID-19 outbreak. On March 19, 2020, Governor Newsom issued an executive order

directing all residents immediately to heed current State public health directives to stay home, except as needed to maintain continuity of operations of essential critical infrastructure sectors.



According to the 2021 Sonoma County Multijurisdictional Hazard Mitigation Plan, in March 2020, Sonoma County was included in the FEMA Major Disaster Declaration for the COVID-19 coronavirus pandemic. As of January 2021, about 23,000 people, or 4.57 percent of the Sonoma County population, had contracted the coronavirus and 234 people, 1.01 percent of the population, had died from it (Sonoma County Emergency 2021). As of January 2021, over 18,000 people in Sonoma County had received the COVID-19 vaccine (Sonoma County Emergency 2021).

Avian Influenza

Avian Influenza, commonly referred to as “Bird Flu,” remains a looming pandemic threat. Avian Influenza primarily spreads from birds to birds and rarely to humans. Public health experts continue to be alert to the possibility that an avian virus may mutate or change so that it can be passed from birds to humans, potentially causing a pandemic in humans. Some strains of the Avian Influenza could arise from Asia or other continents where people have very close contact with infected birds. This disease could have spread from poultry farmers or visitors to live poultry markets who had been in very close contact with infected birds and contracted fatal strains of Avian Influenza. Thus far, Avian Influenza viruses have not mutated and have not demonstrated easy transmission from person to person. However, if Avian Influenza viruses were to mutate into a highly virulent form and become easily transmissible from person to person, the public health community would be very concerned about the potential for an influenza pandemic. Such a pandemic could disrupt all aspects of society and severely affect the economy.

Vector-Borne Diseases

Vector-borne diseases are human illnesses caused by parasites, viruses and bacteria that are transmitted by vectors. Every year there are more than 700,000 deaths from diseases such as malaria, dengue, schistosomiasis, human African trypanosomiasis, leishmaniasis, Chagas disease, yellow fever, Japanese encephalitis and onchocerciasis. Vectors are living organisms that can transmit infectious pathogens between humans, or from animals to humans. Many of these vectors are bloodsucking insects, which ingest disease-producing microorganisms during a blood meal from an infected host (human or animal) and later transmit it into a new host, after the pathogen has replicated. Often, once a vector becomes infectious, they can transmit the pathogen for the rest of their life during each subsequent bite/blood meal.

Mosquito-Borne Viruses

Mosquito-borne viruses belong to a group of viruses commonly referred to as arboviruses (for arthropod-borne). Although 12 mosquito-borne viruses are known to occur in California, only West Nile virus (WNV), western equine encephalomyelitis virus (WEE), and St. Louis encephalitis virus (SLE) are significant causes of human disease. WNV continues to seriously affect the health of humans, horses, and wild birds throughout the state. Since 2003, there have been over 6,000 WNV human cases with 248 deaths, and over 1,200 equine cases.



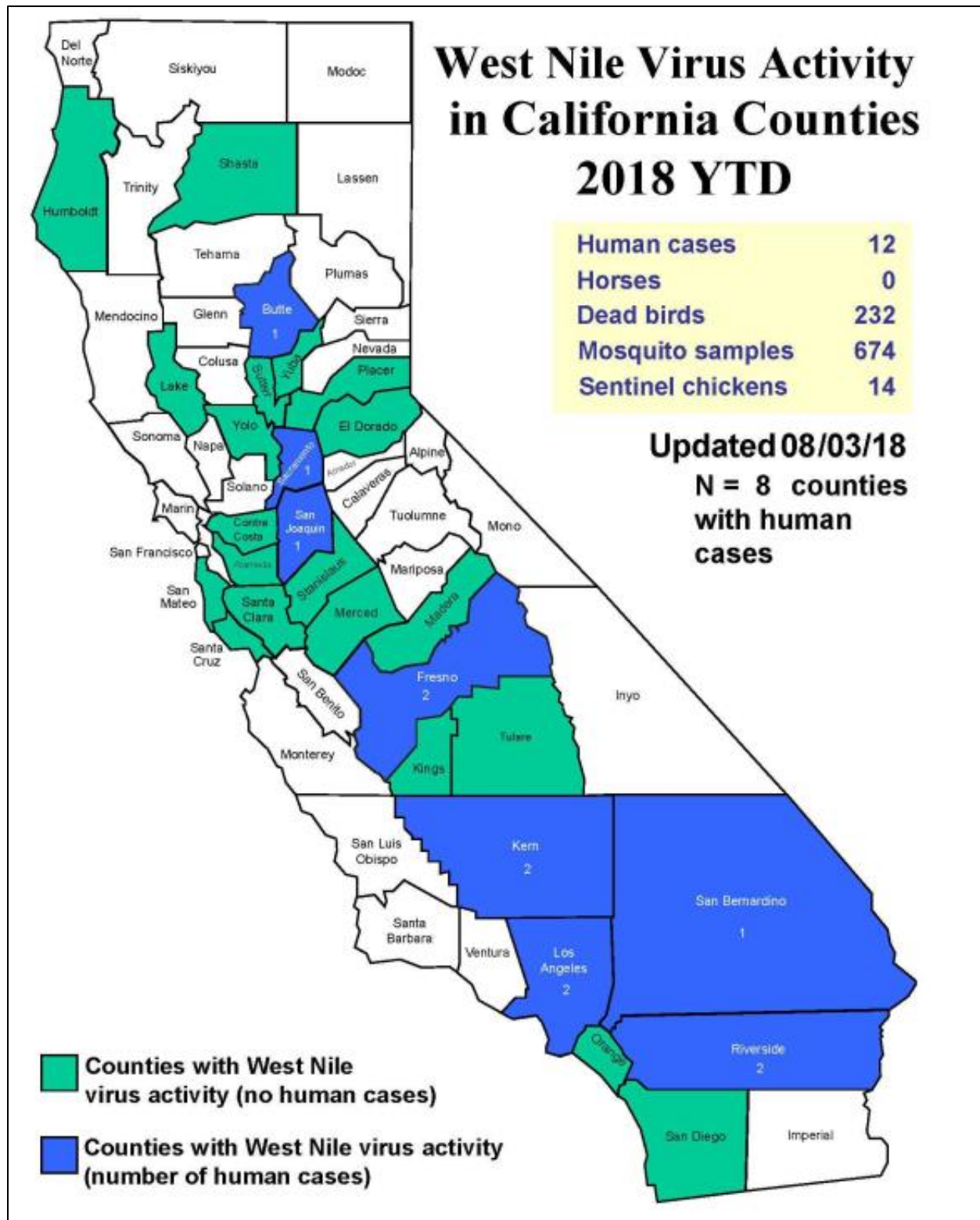
WNV first appeared in the United States in 1999 in New York and rapidly spread across the country to California in subsequent years. California has historically maintained a comprehensive mosquito-borne disease surveillance and control program including the Mosquito-borne Virus Surveillance and Response Plan, which is updated annually in consultation with local vector control agencies.

Climate change will likely affect vector-borne disease transmission patterns. Changes in temperature and precipitation can influence seasonality, distribution, and prevalence of vector-borne diseases. A changing climate may also create conditions favorable for the establishment of invasive mosquito vectors in California.

For most Californians, WNV poses the greatest mosquito-borne disease threat. Above-normal temperatures are among the most consistent factors associated with WNV outbreaks. Mild winters are associated with increased WNV transmission due, in part, to less mosquito and resident bird mortality. Warmer winter and spring seasons may also allow for transmission to start earlier. Such conditions also allow more time for virus amplification in bird-mosquito cycles, increasing the potential for mosquitoes to transmit WNV to people.

The effects of increased temperature are primarily through acceleration of physiological processes within mosquitoes, resulting in faster larval development and shorter generation times, more frequent mosquito biting, and shortening of the incubation period time required for infected mosquitoes to transmit WNV. During periods of drought, especially in urban areas, mosquitoes tend to thrive more due to changes in stormwater management practices. Mosquitoes in urban areas can reach higher abundance due to stagnation of water in underground stormwater systems that would otherwise be flushed by rainfall. Runoff from landscape irrigation systems mixed with organic matter can also create ideal mosquito habitat. Drought conditions may also force birds to increase their utilization of suburban areas where water is more available, bringing these WNV hosts into contact with urban vectors.

Map: West Nile Virus Activity in California Counties
 (Source: California State Hazard Mitigation Plan - 2018)



Lyme Disease

Lyme disease is caused by a spirochete (a corkscrew-shaped bacteria) called *Borrelia burgdorferi* and is transmitted by the Western black-legged tick. Lyme disease was first described in North America in the 1970s in Lyme, Connecticut, the town for which it was then named. Though the tick has been reported from 56 of the 58 counties in California, the highest incidence of disease occurs in the northwest coastal counties and northern Sierra Nevada counties with western-facing slopes. Ticks prefer cool, moist areas and can be found in wild grasses and low vegetation in both urban and rural areas.

The map below shows Western black-legged tick and Lyme disease incidence in California. The Western black-legged tick is commonly found in all green areas shown on the map; dark green areas on the map show where reported Lyme disease cases most often had exposure.

Map: Tick and Lyme Disease Incidence in California
 (Source: California State Hazard Mitigation Plan - 2018)



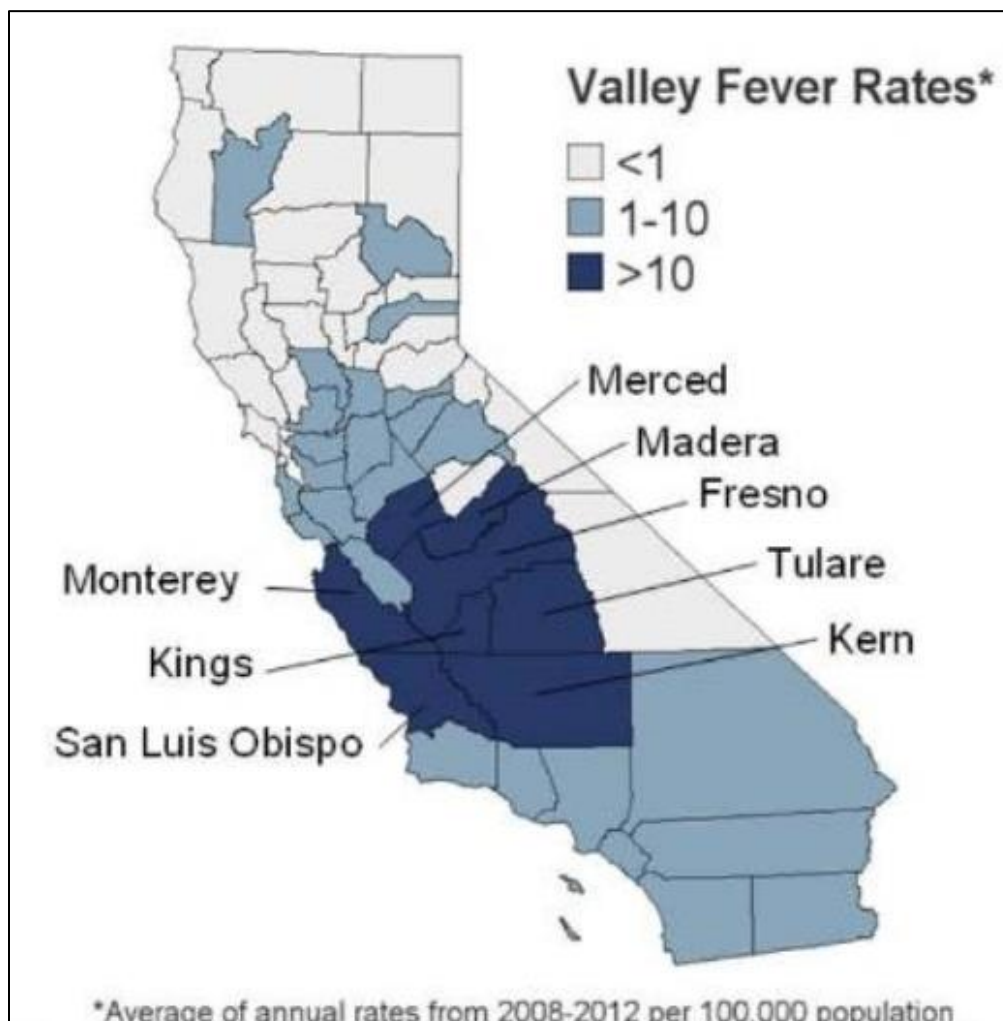
Valley Fever

Valley Fever is caused by *Coccidioides*, a fungus that lives in the soil in the southwestern United States and parts of Mexico, Central America, and South America. Inhaling the airborne fungal spores can cause an infection called coccidioidomycosis, which is also known as “cocci” or “Valley Fever.”

Most people who are exposed to the fungus do not get sick, but some people develop flu-like symptoms that may last for weeks to months. In a very small proportion of people who get Valley Fever, the infection can spread from the lungs to other parts of the body and cause more severe conditions, such as meningitis or even death. Valley Fever cannot spread from person to person.

Most cases of Valley Fever in the U.S. occur in people who live in or have traveled to the southwestern United States, especially Arizona and California. The map below shows the areas where the fungus that causes Valley Fever is thought to be endemic, or native and common in the environment. The full extent of the current endemic areas is unknown and is a subject for further study

Map: Valley Fever Average Annual Rates by California County
 (Source: California State Hazard Mitigation Plan - 2018)



Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B2a.

Q: Does the plan include information on **previous occurrences** of hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i))

A: See **Previous Occurrences of Epidemic/Pandemic/Vector-Borne Diseases in the Project Area** below.

Previous Occurrences of Epidemic/Pandemic/Vector-Borne Diseases in the Project Area

The most recent outbreak to affect SCOE is the current COVID-19 pandemic. On March 14, 2020, SCOE recommended that all Sonoma County school districts temporarily close and suspend classes. Following the school closures, SCOE transitioned to distance learning for all students on March 25th. During this time, SCOE and school districts across the county rapidly adapted to the emergency by providing remote learning, "grab-and-go" meal distribution, pop-up childcare for emergency/medical providers and telecommuting.

On June 12, 2020, SCOE, in collaboration with the Sonoma County Department of Health Services and a committee of regional superintendents, released a document of guiding principles and planning considerations that schools and districts should consider when making plans for opening the 2020-2021 school year. Each district will be responsible for creating its own reopening plan.

The guidance is intended to help school districts plan for the next school year, with the acknowledgment that COVID-19 presents an ever-changing set of challenges. As the COVID-19 situation evolves, and as additional guidance from the State and Sonoma County Department of Health Services is issued during the summer, local school districts will adjust as needed.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3a.

Q: Is there a description of each hazard's impacts on each jurisdiction (what happens to structures, infrastructure, people, environment, etc.)? (Requirement §201.6(c)(2)(ii))

A: See **Impact of Epidemic/Pandemic/Vector-Borne Diseases in the Project Area** below.

Impact of Epidemic/Pandemic/Vector-Borne Diseases in the Project Area

Based on the risk assessment, it is evident that Epidemic/Pandemic/Vector-Borne Diseases will continue to have potentially devastating economic impacts to SCOE. Impacts that are not quantified, but can be anticipated in future events, include:

- ✓ Injury and loss of life
- ✓ Disruption of public infrastructure
- ✓ Significant economic impact (jobs, sales, tax revenue) upon the community
- ✓ Negative impact on commercial and residential property values
- ✓ Significant disruption to citizens as facilities, businesses, and public areas could be closed
- ✓ Significant decrease in convenience of shopping
- ✓ Business operations may be closed or limited to essential and critical needs only

Issues Relating to Epidemic /Pandemic/ Vector-Borne Diseases

Important issues associated with Epidemic / Pandemic / Vector-Borne include the following:

- ✓ A large percentage of the Project Area could be impacted all at the same time which would significantly impact emergency services capabilities.
- ✓ In the event separation or isolation of the populations becomes necessary, schools will be significantly impacted and delivery methods re-examined.
- ✓ Depending on the severity of the situation, it may be necessary to have remote access to computer and control systems.
- ✓ As seen during COVID-19, schools need to be prepared to distance and/or isolate students and staff. The actual disease or outbreak will dictate public health protocols.
- ✓ Transportation systems may be altered or discontinued which will compromise the abilities of staff and parents to be on time.
- ✓ HVAC systems may need to shut down or filters changed more frequently.
- ✓ If an outbreak occurs in a school, the facility may be directed to shelter in place until onsite medical resources can be provided and occupants released for advanced or home care.

Q&A | ELEMENT B: HAZARD IDENTIFICATION AND RISK ASSESSMENT | B3b.

Q: Is there a description of each identified hazard’s overall **vulnerability** (structures, systems, populations, or other community assets defined by the community that are identified as being susceptible to damage and loss from hazard events) for each jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Summary of Vulnerability to Epidemic / Pandemic / Vector-Borne Diseases** below.

Summary of Vulnerability to Epidemic / Pandemic / Vector-Borne Diseases

The following is a summary of vulnerability to epidemic / pandemic / vector-borne diseases. All of SCOE’s properties could be impacted by any of these events including SCOE’s Main Facility, Legal Facility, Overflow Parking Lot, Valley of the Moon, Juniper Shop Facility, CBI, Sonoma Valley – Sassari Elementary, Petaluma City – 4C’s McDowell Elementary, and SELPA Properties Lewis Opportunity School, Headwaters Academy, Sonoma Community Center (SE), and SCOE Alternative Education Properties Satellite Office Space, and Amarosa Academy including a total of approximately 325 occupants, 12 buildings, and property/contents valued at \$51 million. These estimates are based on 2023.

As with COVID-19, it’s very possible that future events will also involve entire regions. As such, social distancing and business closures can curtail SCOE’s capability to provide services to the districts. Larger events could also include problems with supply chain, and delivery of utility-related services including water and electricity.

Students, parents, and staff can be directly and indirectly involved. Public transportation could be minimized or eliminated. As discussed above in “Issues”, many onsite capacities could be impacted including use of HVAC systems requiring filter replacements. Also, large demands could be placed on custodial services.

PART III: MITIGATION STRATEGIES

Mitigation Strategies

Overview of Mitigation Strategy

As the cost of damage from disasters continues to increase nationwide, SCOE recognizes the importance of identifying effective ways to reduce vulnerability to disasters. Mitigation Plans assist communities in reducing risk from natural hazards by identifying resources, information and strategies for risk reduction, while helping to guide and coordinate mitigation activities at SCOE facilities.

The plan provides a set of action items to reduce risk from hazards through education and outreach programs, and to foster the development of partnerships. Further, the plan provides for the implementation of preventative activities.

The resources and information within the Mitigation Plan:

1. Establish a basis for coordination and collaboration among agencies and the public in the Project Area
2. Identify and prioritize future mitigation projects
3. Assist in meeting the requirements of federal assistance programs

The Mitigation Plan is integrated with other plans including the jurisdictional Emergency Operations Plans.

Mitigation Measure Categories

Following is FEMA's list of mitigation categories. The activities identified by the Planning Team are consistent with the six broad categories of mitigation actions outlined in FEMA publication 386-3 *Developing the Mitigation Plan: Identifying Mitigation Actions and Implementing Strategies*.

- ✓ **Prevention:** Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and storm water management regulations.
- ✓ **Property Protection:** Actions that involve modification of existing buildings or structures to protect them from a hazard, or removal from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- ✓ **Public Education and Awareness:** Actions to inform and educate citizens, property owners, and elected officials about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.
- ✓ **Natural Resource Protection:** Actions that, in addition to minimizing hazard losses preserve or restore the functions of natural systems. Examples include sediment and

erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.

- ✓ **Emergency Services:** Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and protection of critical facilities.
- ✓ **Structural Projects:** Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, levees, floodwalls, retaining walls, and safe rooms.

Q&A | ELEMENT C. MITIGATION STRATEGY | C3

Q: Does the plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards?

(Requirement §201.6(c)(3)(i))

A: See **Goals** below.

Q&A | ELEMENT D. MITIGATION STRATEGY | D3

Q: Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))

A: See **Mitigation Actions Matrix** below.

Goals

The Executive Planning Team established goals based on the risk assessment that represent a long-term vision for hazard reduction and enhanced mitigation capabilities. Each goal is supported by mitigation action items. The Executive Planning Team developed these action items through its knowledge of the local area, risk assessment, review of past efforts, identification of mitigation activities, and qualitative analysis.

The five mitigation goals and descriptions are listed below.

Protect Life and Property

Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to losses from natural, human-caused, and technological hazards. Improve hazard assessment information to make recommendations for avoiding new development in high hazard areas and encouraging preventative measures for existing development in areas vulnerable to natural, human-caused, and technological hazards.

Increase Public Awareness

Develop and implement education and outreach programs to increase public awareness of the risks associated with natural, human-caused, and technological hazards. Provide information on tools; partnership opportunities, and funding resources to assist in implementing mitigation activities.

Protect Natural Systems

Support management and land use planning practices with hazard mitigation to protect life. Preserve, rehabilitate, and enhance natural systems to serve hazard mitigation functions.

Promote Partnerships and Implementation

Strengthen communication and coordinate participation with public agencies, riders, non-profit organizations, business, and industry to support implementation. Encourage leadership within SCOE and public organizations to prioritize and implement local and regional hazard mitigation activities.

Enhance Emergency Services

Establish policy to ensure mitigation projects for critical facilities, services, and infrastructure. Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, business, and industry. Coordinate and integrate hazard mitigation activities where appropriate, with emergency operations plans and procedures.

Q&A | ELEMENT C. MITIGATION STRATEGY | C5a.

Q: Does the plan explain how the mitigation actions and projects will be prioritized (including cost benefit review)? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))

A: See **Benefit/Cost Ratings** and **Priority Rating** below.

Benefit/Cost Ratings

The benefits of proposed projects were weighed against estimated costs as part of the project prioritization process. The benefit/cost analysis was not of the detailed variety required by FEMA for project grant eligibility under the Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM), and Building Resilient Infrastructure and Communities (BRIC) grant programs. A less formal approach was used because some projects may not be implemented for up to 10 years, and associated costs and benefits could change dramatically in that time. Therefore, a review of the apparent benefits versus the apparent cost of each project was performed. Parameters were established for assigning subjective ratings (high, medium, and low) to the costs and benefits of these projects.

Cost ratings were defined as follows:

High: Existing jurisdictional funding will not cover the cost of the action item so outside sources of revenue would be required.

Medium: The action item could be funded through existing jurisdictional funding but would require budget modifications.

Low: The action item could be funded under existing departmental funding.

Benefit ratings were defined as follows:

High: The action item will provide short-term and long-term impacts on the reduction of risk exposure to life and property.

Medium: The action item will have long-term impacts on the reduction of risk exposure to life and property.

Low: The action item will have only short-term impacts on the reduction of risk exposure to life and property.

Q&A | ELEMENT D. MITIGATION STRATEGY | D3

Q: Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))

A: See **Mitigation Actions Priority Rating** below.

Mitigation Actions Priority Rating

The Planning Team utilized the following Priority Rating method. Designations of “High”, “Medium”, and “Low” priority have been assigned to all of the action item using the following criteria:

Does the Action:

- ☐ solve the problem?
- ☐ address Vulnerability Assessment?
- ☐ reduce the exposure or vulnerability to the highest priority hazard?
- ☐ address multiple hazards?
- ☐ benefits equal or exceed costs?
- ☐ implement a goal, policy, or project identified in the General Plan or Capital Improvement Plan?

Can the Action:

- ☐ be implemented with existing funds?
- ☐ be implemented by existing state or federal grant programs?
- ☐ be completed within the 5-year life cycle of the LHMP?
- ☐ be implemented with currently available technologies?

Will the Action:

- ☐ be accepted by the community?
- ☐ be supported by community leaders?
- ☐ adversely impact segments of the population or neighborhoods?
- ☐ require a change in local ordinances or zoning laws?
- ☐ positive or neutral impact on the environment?
- ☐ comply with all local, state and federal environmental laws and regulations?

Is there:

- ☐ sufficient staffing to undertake the project?
- ☐ existing authority to undertake the project?

As mitigation action items were updated or written the Planning Team, representatives were provided worksheets for each of their assigned action items. Answers to the criteria above determined the priority according to the following scale.

- 1-6 = Low priority
- 7-12 = Medium priority
- 13-18 = High priority

Q&A ELEMENT C. MITIGATION STRATEGY C1b.
<p>Q: Does the plan document each jurisdiction's ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3))</p> <p>A: See Mitigation Actions Matrix below.</p>
Q&A ELEMENT C. MITIGATION STRATEGY C4a.
<p>Q: Does the plan identify and analyze a comprehensive range (different alternatives) of specific mitigation actions and projects to reduce the impacts from hazards? (Requirement §201.6(c)(3)(ii))</p> <p>A: See Mitigation Actions Matrix below.</p>
Q&A ELEMENT C. MITIGATION STRATEGY C4b.
<p>Q: Does the plan identify mitigation actions for every hazard posing a threat to each participating jurisdiction? (Requirement §201.6(c)(3)(ii))</p> <p>A: See Mitigation Actions Matrix below.</p>
Q&A ELEMENT C. MITIGATION STRATEGY C4c.
<p>Q: Do the identified mitigation actions and projects have an emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii))</p> <p>A: See Mitigation Actions Matrix below.</p>
Q&A ELEMENT C. MITIGATION STRATEGY C5a.
<p>Q: Does the plan explain how the mitigation actions and projects will be prioritized (including cost benefit review)? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))</p> <p>A: See Mitigation Actions Matrix below.</p>
Q&A ELEMENT C. MITIGATION STRATEGY C5b.
<p>Q: Does the plan identify the position, office, department, or agency responsible for implementing and administering the action/project, potential funding sources and expected timeframes for completion? (Requirement §201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))</p> <p>A: See Mitigation Actions Matrix below.</p>
Q&A ELEMENT D. MITIGATION STRATEGY D1
<p>Q: Was the plan revised to reflect changes in development? (Requirement §201.6(d)(3))</p> <p>A: See Mitigation Actions Matrix below.</p>
Q&A ELEMENT D. MITIGATION STRATEGY D2
<p>Q: Was the plan revised to reflect progress in local mitigation efforts? (Requirement §201.6(d)(3))</p> <p>A: See Mitigation Actions Matrix below.</p>
Q&A ELEMENT D. MITIGATION STRATEGY D3
<p>Q: Was the plan revised to reflect changes in priorities? (Requirement §201.6(d)(3))</p> <p>A: See Mitigation Actions Matrix below.</p>
Q&A ELEMENT C. MITIGATION STRATEGY C6c.
<p>Q: The updated plan must explain how the jurisdiction(s) incorporated the mitigation plan, when appropriate, into other planning mechanisms as a demonstration of progress in local hazard mitigation efforts. (Requirement §201.6(c)(4)(ii))</p> <p>A: See Mitigation Actions Matrix below.</p>

Mitigation Actions Matrix

Following is **Table: Mitigation Actions Matrix** which identifies the existing and future mitigation activities developed by the Planning Team. (Note: Funding Source and Planning Mechanism acronyms are FMP-Facilities Maintenance Plan, HMGP-Hazard Mitigation Grant Program, PDM-Pre Disaster Mitigation Grant, BRIC-Building Resilient Infrastructure and Communities)

Sonoma County Office of Education												
Mitigation Action Item	Coordinating Agency	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source and Planning Mechanism: GF- General Fund, FMP, HMGP, PDM, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High
MULTI-HAZARD ACTION ITEMS												
MH-1 Annually update the Facilities Inspection Tool (FIT).	Facilities	Ongoing	X	X	X	X	X	Y	GF	H	L	H
MH-2 Provide annual briefing to the campus Emergency Response Team and Leadership on the results of the Facilities Inspection Tool. A “heads up” on vulnerabilities will help them to assess damages more efficiently.	Facilities	Ongoing	X	X	X	X	X	Y	GF	H	L	H
EARTHQUAKE ACTION ITEMS												
EQ-1 Conduct seismic inventory of facilities and inspect integrity of non-structural devices.	Facilities	1-5 years	X	X	X	X	X	Y	FMP, HMGP, PDM, BRIC, GF	H	M-H	H

EQ-2 Based on the results of the seismic inventory, retrofit or rebuild as necessary.	Facilities	1-5 years	X	X	X	X	X	Y	FMP, HMGP, PDM, BRIC, GF	H	M-H	H
EPIDEMIC/PANDEMIC/VECTOR-BORNE DISEASES ACTION ITEMS												
EPV-1 Upgrade HVAC units in order to be compliant with present-day energy standards.	Facilities	1-5 years	X	X	X	X	X	Y	GF	H	M	H
EPV-2 Install automatization devices/openers to decrease surface contact (doors, fountains, etc.).	Facilities	1-5 years	X	X	X	X	X	Y	GF	H	M	H
FLOODING ACTION ITEMS												
FLD-1 Trim vulnerable trees on campus before large storms.	Facilities	Ongoing	X	X	X	X	X	Y	GF	H	L	H
FLD-2 Clean out and/or expand storm drain capacity as necessary.	Facilities	1 year	X	X	X	X	X	Y	FMP, HMGP, PDM, BRIC, GF	H	M-H	H
TSUNAMI ACTION ITEMS												
TSU-1 Encourage wildfire mitigation measures (i.e., tree breaks) in tsunami-prone areas to reduce impacts of fires that may occur after a tsunami impacts the coastline or river.	Facilities	Ongoing	X	X	X	X	X		GF, FMP, HMGP, PDM, BRIC	H	M-H	H
TSU-2 Locate new infrastructure and critical facilities outside of the tsunami hazard area.	Facilities	1-5 years	X	X	X	X	X	Y	GF, FMP, HMGP, PDM, BRIC	H	M-H	H
UTILITY-RELATED ACTION ITEMS												
UT-1 Research and/or purchase generators suitable for the campus.	Facilities	1 year	X	X	X	X	X	Y	FMP, HMGP, PDM, BRIC, GF	H	M-H	H
UT-2 Research and/or purchase water filtration for the campus.	Facilities	1 year	X	X	X	X	X	Y	FMP, HMGP, PDM, BRIC, GF	H	M-H	H
WILDFIRE ACTION ITEMS												

WF-1 Implement defensible space practices.	Facilities	1 year	X	X	X	X	X		FMP, HMGP, PDM, BRIC, GF	H	M-H	H
WF-2 Research and/or purchase a fire monitoring system.	Facilities	1 year	X	X	X	X	X	Y	FMP, HMGP, PDM, BRIC, GF	H	M-H	H

Plan Maintenance

The plan maintenance process includes a schedule for monitoring and evaluating the Plan annually and producing a plan revision every five years. This section describes how the Project Area jurisdictions will integrate public participation throughout the plan maintenance process.

Local Mitigation Officer

Each of the participating jurisdictions will be responsible for maintaining their Mitigation Actions Matrix – a key to plan implementation. Each participating jurisdiction will have its own Local Mitigation Officer (same individual as assigned to the MJHMP Executive Planning Team). The review and update to the Mitigation Actions Matrices will take place in advance of the semi-annual Plan Maintenance Meeting of the MJHMP Executive Planning Team.

In addition to those efforts of individual jurisdictions, the overall MJHMP will be maintained by the MJHMP Executive Planning Team. The Team will be led by the Executive Planning Team Chair Greg Medici who also serve as SCOE's Local Mitigation Officer. Under the direction of the Chair, the Planning Team will take responsibility for overall plan maintenance and implementation. The Chair will facilitate the MJHMP Planning Team meetings and will assign tasks such as updating and presenting the Plan to the members of the Team. Plan implementation and evaluation will be a shared responsibility among all of the Team members. The various Local Mitigation Officers will coordinate with their leadership to ensure funding for 5-year updates to Plan as required by FEMA.

The Team will be responsible for coordinating implementation of plan action items and undertaking the formal review process. The Local Mitigation Officers will be authorized to make changes in assignments to the current Planning Team.

The MJHMP Planning Team will meet no less than semi-annually during a standing meeting. Meeting dates will be scheduled once the final Planning Team has been established. These meetings will provide an opportunity to discuss the progress of the action items and maintain the partnerships that are essential for the sustainability of the mitigation plan. The Local Mitigation Officers or designee will be responsible for contacting the Planning Team members and organizing the annual meeting which will take place annually during the month of the Plan's approval.

Method and Scheduling of Plan Implementation

	Year 1	Year 2	Year 3	Year 4	Year 5
Monitoring	XX	XX	XX	XX	XX
Evaluating					
Internal Planning Team Evaluation	X	X	X	X	X
Cal OES and FEMA Evaluation					X
Updating					X

Monitoring and Implementing the Plan

Plan Adoption

Each of the participating jurisdiction's Boards of Education will be responsible for adopting the Mitigation Plan. These governing bodies have the authority to promote sound public policy regarding hazards. Once the plan has been adopted, the MJHMP Planning Team Chair will be responsible for submitting it to the State Hazard Mitigation Officer at California Office of Emergency Services (Cal OES). Cal OES will then submit the plan to the Federal Emergency Management Agency (FEMA) for review and approval. This review will address the requirements set forth in 44 C.F.R. Section 201.6 (Local Mitigation Plans). Upon acceptance by FEMA, the MJHMP participating jurisdictions will gain eligibility for Hazard Mitigation Grant Program funds.

Q&A | ELEMENT A: PLANNING PROCESS | A6a.

Q: Does the plan identify how, when, and by whom the plan will be **monitored** (how will implementation be tracked) over time? (Requirement §201.6(c)(4)(i))

A: See **Monitoring the Plan** below.

Monitoring the Plan

The Local Mitigation Officers will hold semi-annual meetings to gather status updates on their mitigation action items. These meetings will provide an opportunity to discuss the progress of the action items and maintain the partnerships that are essential for the sustainability of the mitigation plan. See the **Semi-Annual Implementation Report** discussed below which will be a valuable tool for the Planning Team to measure the success of the Hazard Mitigation Plan. The focus of the annual meeting will be on the progress and changes to the Mitigation Action Items.

Q&A | ELEMENT C. MITIGATION STRATEGY | C6a.

Q: Does the plan identify the local planning mechanisms where hazard mitigation information and/or actions may be incorporated? (Requirement §201.6(c)(4)(ii))

A: See **Implementation through Existing Program** below.

Q&A | ELEMENT C. MITIGATION STRATEGY | C6b.

Q: Does the plan describe each community's process to integrate the data, information, and hazard mitigation goals and actions into other planning mechanisms? (Requirement §201.6(c)(4)(ii))

A: See **Implementation through Existing Programs** below.

Q&A | ELEMENT C. MITIGATION STRATEGY | C6c.

Q: The updated plan must explain how the jurisdiction(s) incorporated the mitigation plan, when appropriate, into other planning mechanisms as a demonstration of progress in local hazard mitigation efforts. (Requirement §201.6(c)(4)(ii))

A: See **Implementation through Existing Programs** below.

Implementation through Existing Programs

The Mitigation Plan provides a series of recommendations - many of which are closely related to the goals and objectives of existing planning programs. The Local Mitigation

Officers will implement recommended mitigation action items through existing programs and procedures.

Each of the project area jurisdictions is responsible for adhering to the State of California's "Field Act" under the direction of the State's Department of Education.

Some of the goals and action items in the MJHMP will be achieved through activities recommended in the policy, capital, and fiscal documents. Within each of the Plan's 39 participants, each will have an internal team including department representatives tasked with mitigation action items. The internal team will meet on a bi-annual basis. Upon bi-annual review, the internal team will work with the departments to identify areas that the MJHMP action items are consistent with the strategic and budget documents to ensure the MJHMP goals and action items are implemented in a timely fashion.

Upon FEMA approval, the MJHMP Executive Planning Team will begin the process of incorporating risk information and mitigation action items into existing planning mechanisms. The bi-annual meetings of the Executive Planning Team will provide an opportunity for Team members to report back on the progress made on the integration of mitigation planning elements into the planning documents and procedures of the various jurisdictions.

Specifically, the Team will utilize the following section from the MJHMP to integrate with other policy, capital, and fiscal documents within their jurisdiction:

- ✓ Risk Assessment (Base Plan), Project Area Profile (Base Plan), Planning Process (Base Plan) – Emergency Operations Plan, Facilities Maintenance Plans, FIT Reports, Comprehensive School Safety Plans, etc.
- ✓ Mitigation Actions Matrix – Capital Projects, Grants, Bonds

Semi-Annual Implementation Report

The Semi-Annual Implementation Matrix is the same as the Mitigation Actions Matrix but with a column added to track the annual status of each Action Item. Upon approval and adoption of the Plan, the entire Semi-Annual Implementation Report will be added to the Appendix of the Plan. Following is a view of the Semi-Annual Implementation Matrix:

Insert here during finalization of the MJHMP

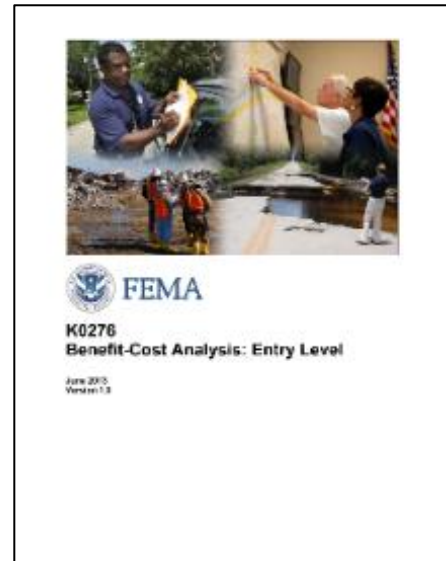
An equal part of the monitoring process is the need to maintain a strategic planning process which needs to include funding and organizational support. In that light, at least one year in advance of the FEMA-mandated 5-year submission of an update, the MJHMP Planning Team Chair will convene the Team to discuss funding and timing of the update planning process. On the fifth year of the planning cycles, the Planning Team will broaden its scope to include discussions and research on all of the sections within the Plan with particular attention given to goal achievement and public participation. If the Planning Team intends to seek federal grant funding, the application should be submitted well in advance of the plan's expiration date to allow for the full grant application process.

Economic Analysis of Mitigation Projects

FEMA's approach to identifying the costs and benefits associated with hazard mitigation strategies, measures, or projects fall into two general categories: benefit/cost analysis and cost-effectiveness analysis.

Conducting benefit/cost analysis for a mitigation activity can assist communities in determining whether a project is worth undertaking now, in order to avoid disaster-related damages later.

Cost-effectiveness analysis evaluates how best to spend a given amount of money to achieve a specific goal. Determining the economic feasibility of mitigating hazards can provide decision-makers with an understanding of the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects.



Given federal funding, the Planning Team will use a FEMA-approved benefit/cost analysis approach to identify and prioritize mitigation action items. For other projects and funding sources, the Planning Team will use other approaches to understand the costs and benefits of each action item and develop a prioritized list.

The “benefit”, “cost”, and overall “priority” of each mitigation action item was included in the Mitigation Actions Matrix located in Part III: Mitigation Strategies. A more technical assessment will be required in the event grant funding is pursued through the Hazard Mitigation Grant Program. FEMA Benefit-Cost Analysis Guidelines are discussed below.

FEMA Benefit-Cost Analysis Guidelines

The Stafford Act authorizes the President to establish a program to provide technical and financial assistance to state and local governments to assist in the implementation of hazard mitigation measures that are cost effective and designed to substantially reduce injuries, loss of life, hardship, or the risk of future damage and destruction of property. To evaluate proposed hazard mitigation projects prior to funding FEMA requires a Benefit-Cost Analysis (BCA) to validate cost effectiveness. BCA is the method by which the future benefits of a mitigation project are estimated and compared to its cost. The end result is a benefit-cost ratio (BCR), which is derived from a project's total net benefits divided by its total project cost. The BCR is a numerical expression of the cost effectiveness of a project. A project is considered to be cost effective when the BCR is 1.0 or greater, indicating the benefits of a prospective hazard mitigation project are sufficient to justify the costs.

Although the preparation of a BCA is a technical process, FEMA has developed software, written materials, and training to support the effort and assist with estimating the expected future benefits over the useful life of a retrofit project. It is imperative to conduct a BCA early in the project development process to ensure the likelihood of meeting the cost-effective eligibility requirement in the Stafford Act.

The BCA program consists of guidelines, methodologies and software modules for a range of major natural hazards including:

- ✓ Flood (Riverine, Coastal Zone A, Coastal Zone V)
- ✓ Hurricane Wind
- ✓ Hurricane Safe Room
- ✓ Damage-Frequency Assessment
- ✓ Tornado Safe Room
- ✓ Earthquake
- ✓ Wildfire

The BCA program provides up to date program data, up to date default and standard values, user manuals and training. Overall, the program makes it easier for users and evaluators to conduct and review BCAs and to address multiple buildings and hazards in a single BCA module run.

Evaluating and Updating the Plan

Q&A | ELEMENT A: PLANNING PROCESS | A6b.

Q: Does the plan identify how, when, and by whom the plan will be **evaluated** (assessing the effectiveness of the plan at achieving stated purpose and goals) over time? (Requirement §201.6(c)(4)(i))

A: See **Evaluation** below.

Evaluation

At the conclusion of the Semi-Annual Implementation Meeting, the MJHMP Planning Team Chair will lead a discussion with the Planning Team on the success (or failure) of the Hazard Mitigation Plan to meet the plan goals. The results of that discussion will be added to the Evaluation portion of the Semi-Annual Implementation Report and inclusion in the 5-year update to the Plan. Efforts will be made immediately by the Planning Team to address any failed plan goals.

Q&A | ELEMENT A: PLANNING PROCESS | A6c.

Q: Does the plan identify how, when, and by whom the plan will be **updated** during the 5-year cycle? (Requirement §201.6(c)(4)(i))

A: See **Formal Update Process** below.

Formal Update Process

As identified above, the Mitigation Action Items will be monitored for status on a semi-annual basis as well as an evaluation of the Plan's goals. The MJHMP Planning Team Chair or designee will be responsible for contacting the Planning Team members and organizing the annual meeting which will take place annually during the month of the Plan's approval. Planning Team members will also be responsible for participating in the formal update to the Plan every fifth year of the planning cycle.

The Planning Team will begin the update process with a review the goals and mitigation action items to determine their relevance to changing situations within the Project Area as well as changes in State or Federal policy, and to ensure they are addressing current and expected conditions. The Planning Team will also review the Plan's **Risk Assessment**

portion of the Plan to determine if this information should be updated or modified, given any new available data. The **coordinating organizations** responsible for the various action items will report on the status of their projects, including the success of various implementation processes, difficulties encountered, success of coordination efforts, and which strategies should be revised. Amending will be made to the Mitigation Actions Matrix and other sections in the Plan as deemed necessary by the Planning Team.

Q&A | ELEMENT A: PLANNING PROCESS | A5

Q: Is there discussion of how the community(ies) will continue public participation in the plan maintenance process? (Requirement §201.6(c)(4)(iii))

A: See **Continued Public Involvement** below.

Continued Public Involvement

Each of the participating jurisdictions is dedicated to involving the public directly in the continual review and updates to the Multi-Jurisdictional Hazard Mitigation Plan. Copies of the plan will be made available at each of the District Offices and on each of their websites. The existence and location of these copies will be publicized through customary mediums for each of the jurisdictions. These postings will also contain an email address and phone number where people can direct their comments and concerns. At the discretion of the MJHMP Planning Team Chair, a public meeting may be held after the Semi-Annual Implementation Meeting. The meeting would provide the public a forum in which interested individuals and/or agencies could express their concerns, opinions, or ideas about the plan.

The MJHMP Planning Team Chair will be responsible for using a range of resources to publicize any public meetings and always free to maintain public involvement through the public access channel, web page, and newspapers.

Annexes

The “Base Plan” was prepared for the Sonoma County Office of Education. The Base Plan contains all of the background information and hazard research for the entire project area.

Annexes were prepared for each of the 38 districts within the project area. The Annexes include agency-specific information including participation in the planning process, a location map and description of the agency, and a hazard profile, ranking, and map. Additionally, the Annexes contain information regarding agency-specific protocols for integrating the MJHMP with other plans and processes.

Attachments

FEMA Letter of Approval

See next 4 pages



U.S. Department of Homeland Security
FEMA Region 9
1111 Broadway, Suite 1200
Oakland, CA 94607

FEMA

April 18, 2023

Bonnie Brown
Administrative Operations Specialist
Sonoma County Office of Education
5340 Skylane Boulevard
Santa Rosa, CA 95403

Dear Bonnie Brown:

The *Sonoma County Office of Education Multi-Jurisdictional Hazard Mitigation Plan 2023* was officially adopted by the Sonoma County Office of Education on April 6, 2023 and submitted for review and approval to the Federal Emergency Management Agency (FEMA). The review is complete, and FEMA finds the plan to be in conformance with the Code of Federal Regulations, Title 44, Part 201, Section 6 (44 C.F.R. 201.6). A list of the status of participating jurisdictions is enclosed with this letter.

This plan approval ensures the Sonoma County Office of Education continued eligibility for funding under FEMA's Hazard Mitigation Assistance programs, including the Hazard Mitigation Grant Program (HMGP), the Building Resilient Infrastructure and Communities program (BRIC), and the Flood Mitigation Assistance (FMA) program. All requests for funding are evaluated individually according to eligibility and other program requirements. Approved hazard mitigation plans may also be eligible for points under the National Flood Insurance Program's Community Rating System (CRS).

FEMA's approval is for a period of five years, effective starting the date of this letter. Prior to **April 18, 2028**, the Sonoma County Office of Education and all participating jurisdictions must review, revise, and submit their plan to FEMA for approval to maintain eligibility for grant funding. The enclosed plan review tool provides additional recommendations to incorporate into future plan updates.

If you have any questions regarding the planning or review processes, please contact the FEMA Region 9 Hazard Mitigation Planning Team at fema-r9-mitigation-planning@fema.dhs.gov.

Sincerely,

for Kathryn Lipiecki
Director, Mitigation Division
FEMA Region 9

Enclosures (2)

Sonoma County Office of Education Plan Review Tool, dated April 18, 2023
Status of Participating Jurisdictions, dated April 18, 2023

cc: Alison Kearns, Planning and Implementation Branch Chief, FEMA Region 9
Ron Miller, Acting State Hazard Mitigation Officer, California Governor's Office of
Emergency Services
Robyn Fennig, Planning Division Chief, California Governor's Office of Emergency
Services
Victoria LaMar-Haas, Hazard Mitigation Planning Chief, California Governor's Office of
Emergency Services

Status of Participating Jurisdictions as of April 18, 2023

Jurisdictions – Adopted and Approved

#	Jurisdiction	Date of Adoption
1	Sonoma County Office of Education	

Jurisdictions – Approvable Pending Adoption

#	Jurisdiction
1	Alexander Valley Union School District
2	Bellevue Union School District
3	Bennett Valley Union School District
4	Cinnabar School District
5	Cloverdale Unified School District
6	Cotati-Rohnert Park Unified School District
7	Dunham School District
8	Forestville Union School District
9	Fort Ross Elementary School District
10	Geyserville Unified School District
11	Gravenstein Union School District
12	Guerneville School District
13	Harmony Union School District
14	Healdsburg Unified School District
15	Horicon School District
16	Kashia School District
17	Kenwood School District
18	Liberty School District
19	Mark West Union School District
20	Monte Rio Union School District
21	Montgomery Elementary School District
22	Oak Grove Union School District
23	Old Adobe Union School District
24	Petaluma City Schools
25	Piner-Olivet Union School District
26	Rincon Valley Union School District

27	Roseland Public Schools
28	Santa Rosa City Schools
29	Sebastopol Union School District
30	Sonoma Valley Unified School District
31	Twin Hills Union School District
32	Two Rock Union School District
33	Waugh School District
34	West Side Union School District
35	West Sonoma County Union High School District
36	Wilmar Union School District
37	Windsor Unified School District
38	Wright Elementary School District

Board of Education Adoption Resolutions

See 2 page resolution with this agenda item

Sample Staff Report to Board of Education

See resolution report with this agenda item

Invitation to Executive Team Kick-Off Meeting

On Wednesday, March 4, 2020, 02:32:04 PM PST, Bonnie Tanner <btanner@scoe.org> wrote:

We are starting to plan for the first of 3 planning sessions with the districts for the SCOE Hazard Mitigation Plan development. The hazard mitigation planning process entails identifying natural hazards posing the greatest threat to properties owned by the Districts. Hazard mitigation is defined as actions taken to minimize or eliminate threats associated with hazards. The planning process will include hazard identification and capturing existing and future mitigation actions. The resulting plan will make SCOE and all of the districts eligible for federal and state grants. The project has been divided into 4 "areas". Each of those Area Planning Teams will meet for 2-hours on 3 occasions. The purpose of the first meeting will be to discuss the overall project, timeline, review of concepts and issues relating to hazard mitigation and to discuss opportunities for community outreach. We will also review the initial hazard research conducted to date by the consultant.

Below is a list of how the districts are divided into areas as well as the schedule of the upcoming meetings. Your district will need to attend the specified meeting that coordinates with the area you have been assigned. Your attendance is required at each meeting. Please mark your calendar for all future meetings (reminders will be sent out).

Intended participants are as follows: Point of Contact (required), Superintendent, CBO, Facilities Director, and any additional district or site staff you feel is appropriate for this project. This could include site personnel for individual schools. Those that attend will be asked to weigh in on their ideas of mitigation projects needed for the district.

Areas:

North: Cloverdale, Geyserville, Healdsburg, West Side, Alexander Valley, Windsor

West: Horicon, Kashia, Montgomery, Guerneville, Monte Rio, Harmony, Twin Hills, Sebastopol, Gravenstein, WSCUHSD, Fort Ross, Forestville, Oak Grove

Central: SRCS, Piner-Olivet, Mark West, Bellevue, Wright, Roseland, Cotati-RP, Bennett Valley, Rincon Valley, Kenwood, SCOE

South: Petaluma, Sonoma Valley, Old Adobe, Cinnabar, Two Rock, Liberty, Dunham, Waugh, Wilmar, SCOE

1st Area Planning Team:

March 23rd

9:00-11:00 am West Area

1:00-3:00 pm North Area

March 24th

9:00-11:00 am, South Area

1:00-3:00 pm Central Area

2nd Area Planning Team:

April 27th

9:00-11:00 am West Area

1:00-3:00 pm North Area

April 28th

9:00-11:00 am, South Area

1:00-3:00 pm Central Area

3rd Area Planning Team:

May 18th

9:00-11:00 am West Area

1:00-3:00 pm North Area

May 19th

9:00-11:00 am, South Area

1:00-3:00 pm Central Area

Please use the link below to let us know how many people to expect from your district. Please let me know if you have any questions.

[RSVP](#) Due by March 13th

Bonnie Tanner
Department Administrative Specialist
Business Services
707-524-2628

Executive Team Kick-Off Meeting Sign-In Sheets

Sonoma County Office of Education

Hazard Mitigation Kick-Off Meeting

February 11, 2020

Initials	District	Last Name	First Name	Title/Position	Will you be the official Point of	Email Address
	Bennett Valley	Field	Sue	Superintendent	Yes	sue.field@bvusd.org
	Cloverdale Unified School	Scaramella	Rick	Director Of MOT	Yes	scaramella@cusd.org
	Cotati-Rohnert Park Unified School District	Savage	Josh	Executive Director of Facilities, Maintenance and Operations	Yes	josh_savage@crpusd.org
	Forestville	Semik	Renee	Superintendent	Yes	rsemik@forestvilleusd.org
	Fort Ross	Markatos	John	Supt	Yes	fred@mcn.org
	Geyersville	Bertolucci	Deborah	Superintendent	Yes	dbert@gusd.com
	Geyersville	Menicucci	Christina	Manager of Business Services	No	cmenicucci@gusd.com
	Guerneville	Pedersen	Dana	Superintendent	Yes	dpedersen@guernevilleschool.org
	Harmony	Morgan	Matthew	Superintendent-Principal	Yes	mmorgan@harmonyusd.org
	Healdsburg Unified School District	Smith	Robert	Maintenance and Operations Supervisor	Yes	rsmith@husd.com
	Kashia	Pomplin	Patti	CBO	Yes	ppomplin@kashiaesd.org
	Mark West	Calloway	Ronald	Suprintendent	No	rcalloway@mwusd.org
	Mark West	Cuculich	Regina	Assoc. Supt of Business	No	rcuculich@mwusd.org
	Monte Rio	Myers	Nathan	Superintendent	Yes	nmyers@monteriousd.org
	Montgomery School District	Parmeter	Taryn	District Secretary	Yes	office@mescas.org
	Oak Grove	Stringfellow	Amber	Superintendent	Yes	astringfellow@ogusd.org
	Old Adobe	Williams	Lynda	CBO	Yes	lwilliams@oldadobe.org
	Petaluma City Schools	Thomas	Chris	Chief Business Officia	Yes	cthomas@petk12.org
	Pinar-Olivet USD	Koha	Felicia	Chief Business Officia	Yes	fkoha@pousd.org
	RESIG	Davis	Will	Director of Environmental Services	No	wdavs@resig.org
	RESIG	Fields	Steven	Risk Manager	No	sfields@resig.org

Initials	District	Last Name	First Name	Title/Position	Will you be the official Point of	Email Address
DB	Rincon Valley Union School District	Hebel	Daniel	M&O Supervisor	Yes	dhebel@rvusd.org
AK	Roseland	Jones-Kerr	Amy	Superintendent	Yes	ajones-kerr@roselandsd.org
MS	Santa Rosa City Schools	Edson	Rick	Deputy Superintendent	Yes	redson@srcs.k12.ca.us
LI	SCOE	Silva	Mark	Director of Facilities	Yes	msilva@scoe.org
LI	Sebastopol	Irving	Linda	Superintendent	No	lirving@sebusd.org
BO	Sebastopol Union Schools	Ono	Brent	Fac. Sup	Yes	bono@sebusd.org
DS	Sonoma Valley	Sandoval	David	Manager of Maintenance and Operations	Yes	dsandoval@sonomaschools.org
BB	Twin Hills	Bickford	Barbara	Superintendent	Yes	bbickford@twinhillsusd.org
	Two Rock	Hurley	TJ	Chief Business Officer	No	thurley@trusd.org
	Waugh	Gardner	Mike	Superintendent	Yes	mgardner@waughsd.org
✓	Wright	Jereb	Bill	Director of Maintenance	Yes	bjereb@wrightsd.org
AS	Wright	Schalble	Adam	Superintendent	No	aschalble@wrightsd.org
AK	Cinnabar	Judy	Angel	CBO	Yes	ajudyecinnabar.org
	RESIG	Dektor	Christine	Loss Prev.	Yes	cdeleto@resig.org
	Wright	Jereb	Bill	Director	Yes	bjereb@wrightsd.org

Initials	District	Last Name	First Name	Title/Position	Will you be the official Point of	Email Address
MR	Alexander Valley	Reno	Matt	Supt./Principal	Yes	mreno@alexandervalleyusd.org
BB	Bellevue	Farrell	Roger	Director of Maintenance & Operations	Yes	rfarrell@busd.org
DR	Dunham	Hoffman	Daniel	Superintendent	Yes	Dhoffman@dunhamsd.k12.ca.us
WH	Gravenstein USD	Holden	Wanda	CBO	Yes	wholden@grav.k12.ca.us
BB	Horicon	McFarland	Jeff	Superintendent/ Principal	Yes	jmcFarland@horiconsd.org
BB	Kenwood	Bales	Bob	Superintendent/Principal	Yes	bbpetaluma@gmail.com
CR	Liberty	Rafanelli	Christopher	Superintendent	Yes	crafanelli@libertysd.org
MS	Mark West	Smith	Michael	Dir of M&O	Yes	msmith@mwusd.org
TR	Two Rock	MacClain	Betha	Superintendent	Yes	bmacclain@trusd.org
WM	West Side	Menlove	Kris	Superintendent-Principal	Yes	kmenlove@westsideusd.org
	West Sonoma County UHS District	Bruneman	Jennie	Director of Facilities	Yes	jbruneman.do@wscuhsd.k12.ca.us
CR	Windsor Unified	Canelake	Chris	Director of Human Resources	Yes	ccanelake@wusd.org
	Wilmar	Garvey	Shirley	Supt/Principal	Yes	sgarvey@wilmarusd.org
	East Sonoma	Torkhanian	Em	Loss Prevention		etorkhanian@resig.org

Planning Team Agendas

Executive Planning Team

Agenda: Executive Planning Team Meeting #1

Agenda

SCOE Executive Planning Team Kick-Off Meeting

February 11 or 12, 2020

- 1. Introductions**
 - a. Consultants**
 - b. Executive Planning Team**
- 2. FEMA Independent Study Course 318 – Hazard Mitigation**
- 3. Discuss Planning Process**
 - a. Executive Planning Team**
 - b. Area Planning Teams**
 - c. Site-Specific Planning Team**
- 4. Community Outreach Alternatives**
- 5. Adoption and Approval Process**

Area Planning Team

Agenda: Area Planning Team Meeting

Agenda

Area Planning Team Meeting

April 27 or 28, 2020

- 1. Introductions**
- 2. Summary of Hazard Analysis**
- 3. Examples of Hazard Mitigation**
- 4. Federal Requirements Regarding Hazard Mitigation Planning**
- 5. Developing a Hazard Mitigation Strategy**
 - a. Document Existing and Future Hazard Mitigation Activities (including review of items identified in first draft plan).**
 - i. Action Item**

- ii. Goals Achieved
- iii. Coordinating Agency
- iv. Timeline
- v. Funding and Planning Mechanisms
- vi. Benefit, Cost, and Priority

Entity Planning Team

Agenda: Entity Planning Team Meeting

Agenda

Entity Planning Team Meeting

May 2020

- 1. Developing a Hazard Mitigation Strategy**
 - a. Document Existing and Future Hazard Mitigation Activities (including review of items identified in first draft plan).**
 - 1. Action Item**
 - 2. Goals Achieved**
 - 3. Coordinating Agency**
 - 4. Timeline**
 - 5. Funding and Planning Mechanisms**
 - 6. Benefit, Cost, and Priority**

Secondary Stakeholders Involvement

The Third Draft Plan was distributed to the general public and external agencies on August 21, 2021. Following the review by Cal OES, a Fourth Draft Plan was distributed on January 30, 2023.

Date Invited to Provide Input or Input Gathered	Agency Represented, Name, Position Title	Information Received	How Information was Incorporated into Plan
External Agencies			
August 21, 2021	Department of Emergency Management, Christopher Godley, Director	None	N/A
August 21, 2021	PRMD, Administration, Regina De Le Cruz, Deputy Director	None	N/A
August 21, 2021	PRMD, Natural Resources, Lisa Hulette, Department Program Manager	None	N/A
August 21, 2021	PRMD, Engineering and Construction, Nathan Quarles, Deputy Director	None	N/A
August 21, 2021	PRMD, Fire Prevention & Hazardous Materials, Steve Mosiurchak, Fire Warden / Fire Marshall	None	N/A
August 21, 2021	Emergency Operations Center, Jeff DuVall, Deputy Director	None	N/A
August 21, 2021	City of Petaluma, Peggy Flynn, City Manager	None	N/A
August 21, 2021	City of Santa Rosa, Clare Hartman, Acting Assistant City Manager	None	N/A
August 21, 2021	City of Sonoma, Garrett Toy, City Manager	None	N/A
August 21, 2021	City of Windsor, Kem MacNab, Town Manager	None	N/A
August 21, 2021	City of Cloverdale, David Kelley, City Manager	None	N/A
August 21, 2021	City of Rohnert Park, Darrin Jenkins, City Manager	None	N/A
August 21, 2021	City of Cotati, Damien O'Bid, City Manager	None	N/A

August 21, 2021	City of Sebastopol, Larry McLaughlin, City Manager	None	N/A
August 21, 2021	City of Healdsburg, Jeff Kay, City Manager	None	N/A
August 21, 2021	County Administrator's Office, Sheryl Bratton, County Administrator	None	N/A
General Public			
August 21, 2021	Jennifer Palladini	"I appreciate the plan's recognition of the role that climate change plays in amplifying hazardous risks to our schools. I would like the plan to recognize the importance of coordinated local action to reduce carbon emissions within Sonoma County in order to do our part to reduce future hazards predicted to continue to increase with climate change. An important part of mitigation, of reducing the severity of these hazards, is confronting the growing emissions that amplify these hazards."	Added multi-hazard mitigation action item.
August 21, 2021	Anonymous	Several comments regarding the Calculated Priority Risk Index.	Comment added to the introduction to the Calculated Priority Risk Index in the Risk Assessment clarifying the scale is used to compare maximum credible events (e.g., local declaration declared)
August 21, 2021	Eric Hoffman	Correction to change Santa Ana winds to Diablo winds.	Correction to Wildfire Hazard Section.
August 21, 2021	Eric Hoffman	Recommended addition of Local Responsibility Area maps of high fire hazard locations within incorporated cities.	Defensible Space maps added for Cloverdale and Santa Rosa.
August 21, 2021	Bill Jensen	Recommended better clarification on wildfires vs public safety power shutoff events.	Clarification added to Utility-Related Events Hazard Section.

August 21, 2021	Hannah Lee	Wants to volunteer to help with implementing mitigation actions. Has written LHMPs and have HMGP grants I'm currently on at work. Also, the need for seismic assessment/inventory of facilities was common among districts. Would this occur individually by each district or could there be a countywide grant application for this work? It seems like it would be eligible for HMGP planning funding if it is part of the risk assessment for a 2026 update. I think multi-jurisdictional updates are eligible for \$250k. If the cost of a countywide assessment is much more than that of older buildings could be grouped and prioritized for the 2026 update.	No changes made to content of plan document. This community outreach comment will memorialize the offer of assistance.
August 21, 2021	Robin Haines	I appreciate the work that has gone into this document. As a volunteer at The Petaluma Wildlife Museum at Petaluma High School I do have concerns about power outages and our live animal collection in the event of a long-term power outage. We are not linked to the high solar grid and have been waiting two years for the generator we were told we would get. Our reptiles will develop significant health issues without proper heat and lighting.	Shared with Petaluma High School for inclusion in the mitigation action items.
August 21, 2021	Jen Sturdy	FIRST COMMENT: From the risk mitigation section, "EPV-1 Upgrade HVAC units in order to be compliant with present-day energy standards." This is helpful, but can you confirm if this includes a filtration system for air purification in the event of wildfire and toxic air pollution? It is a much more likely scenario that we have wildfire smoke affecting the area and kids may remain in school, but a concern is air quality - what is the mitigation strategy?	This level of specificity will be based on the "present-day energy standards" in place when the mitigation action item is carried out.

August 21, 2021	Jen Sturdy	<p>SECOND COMMENT: In the risk mitigation plan, how is 'extreme heat' not included as a risk with corresponding risk mitigation? As we look at increasing temperatures during the school year (April, May, June, August, September, October) and drier winters, how might this impact schools and ability for children to stay safely in school? There seem to be a variety of issues to consider here - anywhere between solar energy options and smart grid options (to stay powered through rolling blackouts or other power outages - some districts list this, many list generators - are generators really the only/best option here for sustainability?), considering cool roofing and cool pavement options, ensuring trees/shade and safe play areas, reconsidering extent of impermeable vs. permeable surfaces, etc. Please consider including 'extreme heat' as a likely probable risk factor for our County and risk mitigation strategies.</p>	<p>The Utility Related Hazard-Specific Section identifies issues relating to extreme heat and impacts to utility services. There are several mitigation action items in the Base Plan and Annexes mitigating against extreme heat – they are listed in the Multi-Hazard section of the Mitigation Actions Matrices.</p>
		<p>THIRD COMMENT: As we think about risk factors and risk mitigation - much of this seems to dovetail with great work being done in city/school infrastructure resiliency and what schools can do on a large scale to directly mitigate forces driving climate change - points in addition to those listed above: creating green space, rain gardens, what about electric school buses? (If Stockton can do it, can't Sonoma County - https://www.greencarcongress.com/2021/05/20210506-stockton.html) how is school food waste managed/composted? etc..</p>	<p>Excellent point. During the Implementation phase of this project, the Planning Team will be reminded to look over the comments received.</p>

August 21, 2021	Jen Sturdy	FOURTH COMMENT: Funding may be a limitation for why we see only a certain list of mitigation efforts - is this the case? If so, again how is this work viewed through the larger lens of climate resiliency and green infrastructure to identify government and private funding options? This report is excellent and thoughtful, but it does seem that it needs to be placed in a larger picture so that we aren't limiting our risk assessment and mitigation around a certain set of available funds.	Funding source is identified and the "cost" ranking for each mitigation action item is not based on a dollar amount but rather the level of difficulty to acquire the funds. Please see the Mitigation Strategies section for information on the ranking and prioritizing process.
August 21, 2021	Anonymous	Have worked for Gravenstein since 2003. When I started working there, we had around 250 students. I feel that the school has grown too big. These safety concerns are a bit unnerving. I look forward to hearing what the plan is going forward. At the moment, I feel completely unprepared for an emergency that would require everyone to leave campus all at once.	These excellent points should be considered as the District updates its Emergency Response Plan and District's Strategic Plan.
August 21, 2021	Dan Northern	He finds it interesting and disappointing that the plan does not address active shooters, structural fires on campus and threatening the campus and hazardous materials releases from nearby roadways or industry.	HMPs are tied to natural hazards.
August 21, 2021	Dan Northern	He finds it interesting that the WSCUHSD only has 12 items listed for 3 campuses, 1500 students, and over 70 acres of facilities and grounds. Further oversight of the District's hazard mitigation issues seems necessary.	Such observations should be shared during the decision-making process at the District level.

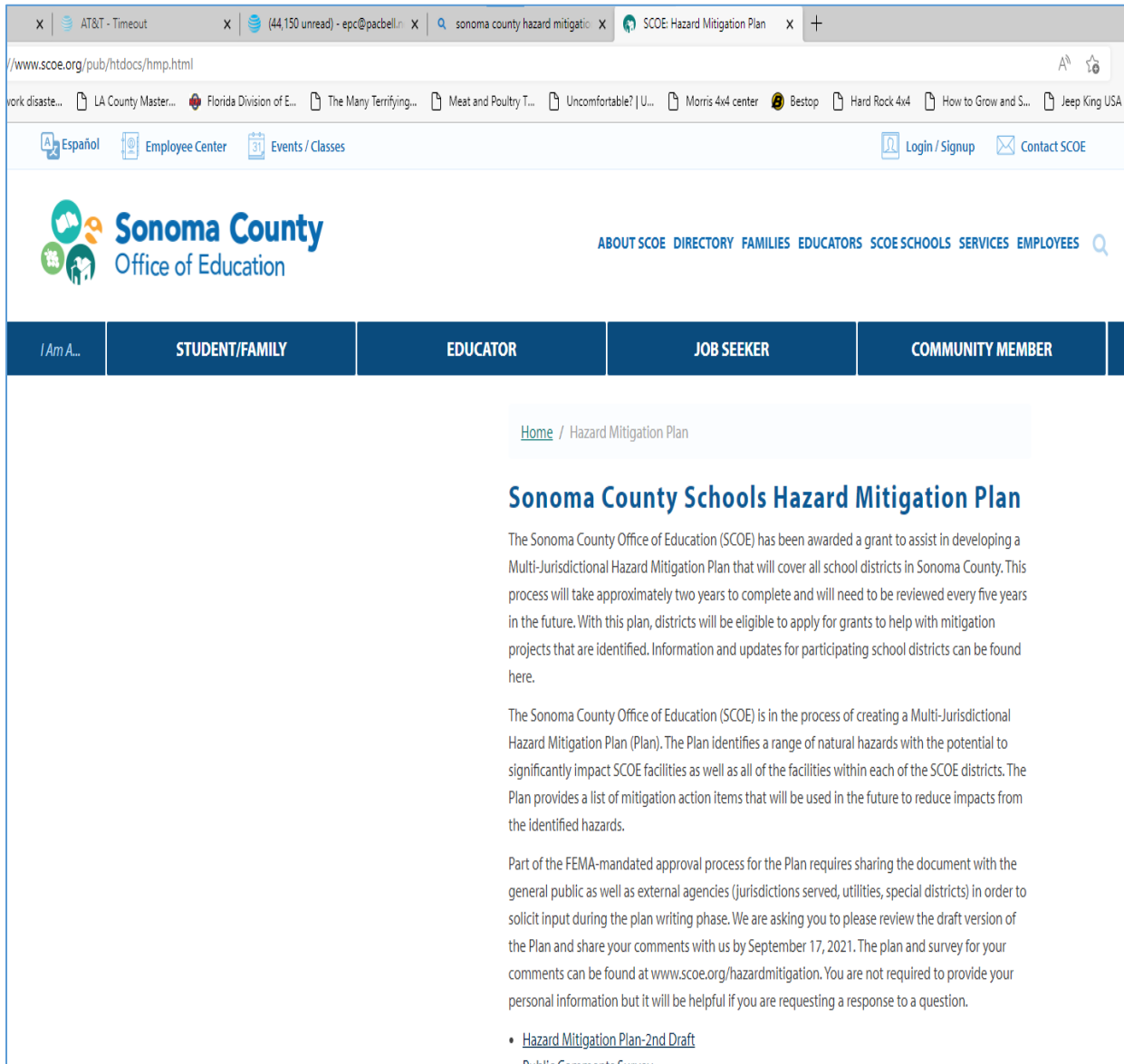
August 21, 2021	Andy Kiehl	<p>This is an extremely high level review. Good job on identifying hazards. The mitigation activities are lacking across all areas. The report fails to indicate, based on risk level, the highest level priorities across the county and within district. All of the dangers and mitigation plans are treated with similar import and priority. Earthquake safety is paramount to the community as shown by the risk assessment. Many of these schools were constructed a half century ago. The only reason local earthquakes have not had a higher death toll is because people were at home as stated in the report. This is a key area to look into investment for the districts (instead of replacing sidewalks that were functionally great and not a safety hazard, instead of putting a new reader board outside all schools...) that no one is willing to step up to write into the report. Risk should also include funding into the calculation of risk.</p>	<p>Clarification: the risks are "ranked" using the Calculated Priority Risk Index.</p>
August 21, 2021	David Rose	<p>For the section on the Gravenstein Union School District, I think it is very important for the committee to be aware of an additional hazard for the students at our elementary school, Gravenstein Elementary. Our school, with an enrollment of 495, is located at the end of Twig Avenue, meaning there is only one way in and out. As a result, we have significant traffic issues. On normal days, this is an inconvenience. If we were to have an emergency on this campus that would require an evacuation, it would take a minimum of 3 hours for all families to get to campus to pick up their student(s). If the emergency involved an immediate threat to safety, that timeline would put many students at risk, and would greatly inhibit access to the campus by law enforcement or emergency services personnel. I think it is very important for this situation to be noted in the plan and included in any mitigation efforts.</p>	<p>These important points should be shared with the District's Hazard Mitigation Planning Team as well as the Board of Trustees during the decision-making process.</p>

August 21, 2021	Sam Cole	Gravenstein Elementary School is located at the end of Twig Avenue. There is no other road in or out of the school. This causes significant traffic which could be extremely dangerous in an evacuation scenario, as it would take hours for all students to be able to be picked up. The traffic, when at its worst, would almost certainly block road and school access for emergency vehicles needing to reach the school.	These important points should be shared with the District's Hazard Mitigation Planning Team as well as the Board of Trustees during the decision-making process.
August 21, 2021	Anonymous	I am concerned about access to the Gravenstein Union School District in the event of an emergency. There is only one street in and out of the school so there is a serious traffic issue if emergency vehicles need to get to the school in a timely matter during any hazardous or emergency situation.	These important points should be shared with the District's Hazard Mitigation Planning Team as well as the Board of Trustees during the decision-making process.
August 21, 2021	Katie Anderson	There was no mention of improving access to the Gravenstein Elementary School site and creating evacuation routes. This is a significant concern for a school of 550 people and one ingress/egress.	These important points should be shared with the District's Hazard Mitigation Planning Team as well as the Board of Trustees during the decision-making process.

August 21, 2021	Erin Hillmer	In the section on Gravenstein School District in Sebastopol (page 138) there is no mention of dealing with the issue of the school being at the end of a one way street. On normal days, this is inconvenient and mildly dangerous. In case of emergency or need to evacuate, it would be very dangerous and nearly impossible to navigate. There are nearly 500 students enrolled and evacuation would take hours with the current traffic limitations. There is also an issue if emergency vehicles or police need to get to campus, as the road is completely blocked with cars coming/going. If there was an imminent threat, the staff and nearly 500 enrolled students would be in danger, with only one way in/out. I urge the committee to add this to the Gravenstein School plans.	These important points should be shared with the District's Hazard Mitigation Planning Team as well as the Board of Trustees during the decision-making process.
August 21, 2021	Gail Carnahan	I second our Superintendent's comments: "I think it is important for the committee to be aware of another potential hazard for the Gravenstein Elementary School District in Sebastopol. Gravenstein Elementary School is located at the end of Twig Avenue and has an enrollment of 495 students. The school is located where Twig Avenue ends, which means there is only one way in and out. On a normal day, this causes some significant traffic and is inconvenient. On a day where there is a threat to student and staff safety and an evacuation is necessary, it would take a minimum of three hours in order for all families to be able to get to campus to take their child(ren) to safety. If the threat to the campus was imminent, many students and staff would be at risk. Additionally, if law enforcement or public safety vehicles were needed on campus, the traffic would severely limit access and would significantly delay the arrival of safety services to the campus. I think it is very important for the committee to consider addressing this situation with mitigation plans."	These important points should be shared with the District's Hazard Mitigation Planning Team as well as the Board of Trustees during the decision-making process.

August 21, 2021	Amber Ray Hernandez	My children attend Gravenstein Elementary School in the Gravenstein Union School District. Our school is at the end of Twig Ave which is a dead end street. There are almost 500 students at our school. Administration does their best to move traffic in/out as efficiently as possible but I fear if there was ever an emergency and mass evacuation were necessary the school population will be at serious risk. Our school informs us it could take up to three hours to evacuate everyone. That is extremely concerning. Possible evacuation is not the only potential hazard here. If there were an emergency where rescue vehicles had to make it to the school during pick up or drop off time, traffic is complete gridlock and may delay help getting to campus. I feel this is a very serious risk and plead with this committee to consider mitigation plans for our school.	These important points should be shared with the District's Hazard Mitigation Planning Team as well as the Board of Trustees during the decision-making process.
August 21, 2021	Kim Hawkins	There appears to be no action plan for a huge potential disaster at Gravenstein Elementary should it ever be necessary to evacuate due to a fast-moving wildfire. It's hard to believe they ever got permits to build such a large school (nearly 500 enrolled now) with only one way in and out over the long stretch of Twig Avenue and only one lane in each direction! It may require some government action including acquiring property through eminent domain to provide at least one alternate route of escape. It's above my paygrade to figure out how to create another road to the 116 or perhaps an access road connecting further north on Lone Pine, but options need to be explored.	These important points should be shared with the District's Hazard Mitigation Planning Team as well as the Board of Trustees during the decision-making process.
January 30, 2023	Rima Meechan, Superintendent/Principal, West Side Union School District	Updated names of Board members	Incorporated changes.

Website Posting



The screenshot shows a web browser with multiple tabs open. The active tab is titled "SCOE: Hazard Mitigation Plan". The address bar shows the URL: www.scoe.org/pub/htdocs/hmp.html. The website header includes the Sonoma County Office of Education logo and navigation links: [Español](#), [Employee Center](#), [Events / Classes](#), [Login / Signup](#), and [Contact SCOE](#). Below the header is a navigation menu with links: [ABOUT SCOE](#), [DIRECTORY](#), [FAMILIES](#), [EDUCATORS](#), [SCOE SCHOOLS](#), [SERVICES](#), and [EMPLOYEES](#). A search icon is also present. Below the navigation menu is a blue bar with tabs: [I Am A...](#), [STUDENT/FAMILY](#), [EDUCATOR](#), [JOB SEEKER](#), and [COMMUNITY MEMBER](#). The main content area shows the breadcrumb [Home](#) / [Hazard Mitigation Plan](#). The title is **Sonoma County Schools Hazard Mitigation Plan**. The text explains that the Sonoma County Office of Education (SCOE) has been awarded a grant to assist in developing a Multi-Jurisdictional Hazard Mitigation Plan that will cover all school districts in Sonoma County. This process will take approximately two years to complete and will need to be reviewed every five years in the future. With this plan, districts will be eligible to apply for grants to help with mitigation projects that are identified. Information and updates for participating school districts can be found here. The text also states that the Sonoma County Office of Education (SCOE) is in the process of creating a Multi-Jurisdictional Hazard Mitigation Plan (Plan). The Plan identifies a range of natural hazards with the potential to significantly impact SCOE facilities as well as all of the facilities within each of the SCOE districts. The Plan provides a list of mitigation action items that will be used in the future to reduce impacts from the identified hazards. Part of the FEMA-mandated approval process for the Plan requires sharing the document with the general public as well as external agencies (jurisdictions served, utilities, special districts) in order to solicit input during the plan writing phase. We are asking you to please review the draft version of the Plan and share your comments with us by September 17, 2021. The plan and survey for your comments can be found at www.scoe.org/hazardmitigation. You are not required to provide your personal information but it will be helpful if you are requesting a response to a question. At the bottom, there are two links: [Hazard Mitigation Plan-2nd Draft](#) and [Public Comments Survey](#).

Invitations to the General Public

The members of the general public (staff, parents, community) were invited by each of the participating entities using the same letter produced by SCOE. Districts were provided with guidance on the need to distribute the information to their “public” using whatever means they preferred (social media, newsletter, etc.) and to forward proof of distribution to SCOE. This solicitation took place during the plan writing process and yielded input from several stakeholders (See **Stakeholder Involvement** below). The information included background of the project and access to the website posting of the Second Draft Plan. Also, announcements were made during the SCOE Board of Education meetings. Following is the emailed invitation, a screen shot of the

posting on the SCOE website, and a sample web posting from one of the participating districts. Following the Cal OES review, the Fourth Draft was distributed on January 30, 2023 to the public.

August 31, 2021

Subject: 2021 Multi-Jurisdictional Hazard Mitigation Plan

Hello,

The Sonoma County Office of Education (SCOE) is in the process of creating a Multi-Jurisdictional Hazard Mitigation Plan (Plan). The Plan identifies a range of natural hazards with the potential to significantly impact SCOE facilities as well as all of the facilities within each of the SCOE districts. The Plan provides a list of mitigation action items that will be used in the future to reduce impacts from the identified hazards.

Part of the FEMA-mandated approval process for the Plan requires sharing the document with the general public as well as external agencies (jurisdictions served, utilities, special districts) in order to solicit input during the plan writing phase.

We are asking you to please review the draft version of the Plan and share your comments with us by September 17, 2021. The plan and survey for your comments can be found at www.scoe.org/hazardmitigation. You are not required to provide your personal information but it will be helpful, if you are requesting a response to a question.

Thank you in advance for your time and assistance with this project. We look forward to receiving your comments.

Bonnie Brown
Administrative Operations Specialist
Business Services
Sonoma County Office of Education

707-524-2628
bbrown@scoe.org

January 30, 2023

Subject: 2023 Multi-Jurisdictional Hazard Mitigation Plan

Hello,

The Sonoma County Office of Education (SCOE) has been in the process of creating a Multi-Jurisdictional Hazard Mitigation Plan (Plan) since 2020. The Plan identifies a range of natural hazards with the potential to significantly impact SCOE facilities as well as all of the facilities within each of the SCOE districts. The Plan provides a list of mitigation action items that will be used in the future to reduce impacts from the identified hazards.

Part of the FEMA-mandated approval process for the Plan requires sharing the document with the general public as well as external agencies (jurisdictions served, utilities, special districts) in order to solicit input during the plan writing phase.

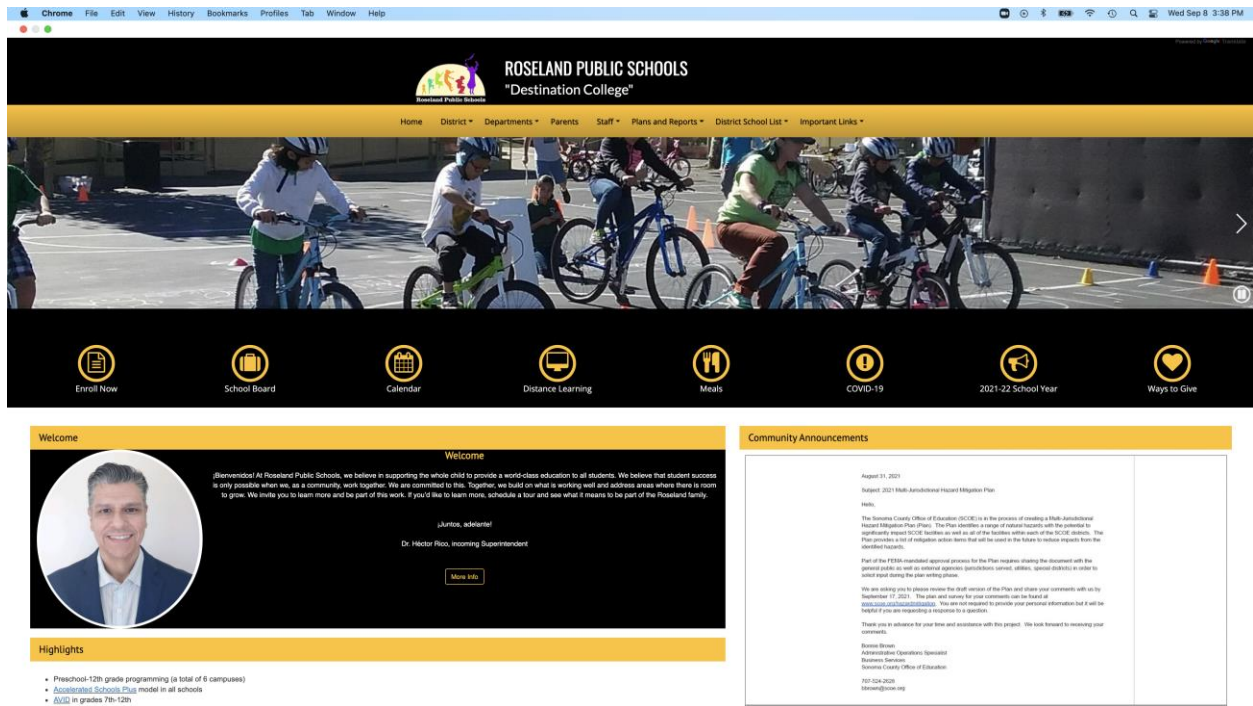
We are asking you to please review the draft version of the Plan and share your comments with us by February 16, 2023. The plan and survey for your comments can be found at www.scoe.org/hazardmitigation. You are not required to provide your personal information but it will be helpful if you are requesting a response to a question.

Thank you in advance for your time and assistance with this project. We look forward to receiving your comments.

Bonnie Brown
Administrative Operations Specialist
Business Services
Sonoma County Office of Education

707-524-2628
bbrown@scoe.org

In addition to the invitations sent by SCOE shown above, following is a sample website invitation sent from one of the participating districts – Roseland Public Schools:




The screenshot displays the Roseland Public Schools website. The header features the school district's name and tagline, "Destination College", along with a navigation menu. Below the header is a large banner image of children riding bicycles. A row of icons provides quick access to various services: Enroll Now, School Board, Calendar, Distance Learning, Meals, COVID-19, 2021-22 School Year, and Ways to Give.

The main content area is divided into two sections. The "Welcome" section on the left features a circular portrait of Dr. Hector Rios, the incoming Superintendent, with a welcome message and a "More Info" button. The "Highlights" section below it lists key initiatives: "Preschool-12th grade programming (a total of 6 campuses)", "Accelerated School Plus model in all schools", and "AVID in grades 7th-12th".

The "Community Announcements" section on the right contains a dated notice from August 31, 2021, regarding the 2021 Multi-Jurisdictional Hazard Mitigation Plan. The notice explains the purpose of the plan, invites community input, and provides contact information for the Sonoma County Office of Education.

Here is a sample of a district forwarding the SCOE email soliciting input on the Hazard Mitigation Plan. The sample is from Wright Elementary School District:

 **Sonoma County**
Office of Education

Bonnie Brown <bbrown@scoe.org>

2021 Multi-Jurisdictional Hazard Mitigation Plan

1 message

Kristin Enbysk <kenbysk@wrightesd.org> Tue, Sep 14, 2021 at 3:05 PM
Reply-To: Kristin Enbysk <kenbysk@wrightesd.org>
To: WRIGHT ELEMENTARY SCHOOL DISTRICT Recipients <recipients@wrightesd.parentlink.net>

Subject: 2021 Multi-Jurisdictional Hazard Mitigation Plan

Hello,

The Sonoma County Office of Education (SCOE) is in the process of creating a Multi-Jurisdictional Hazard Mitigation Plan (Plan). The Plan identifies a range of natural hazards with the potential to significantly impact SCOE facilities as well as all of the facilities within each of the SCOE districts. The Plan provides a list of mitigation action items that will be used in the future to reduce impacts from the identified hazards.

Part of the FEMA-mandated approval process for the Plan requires sharing the document with the general public as well as external agencies (jurisdictions served, utilities, special districts) in order to solicit input during the plan writing phase.

We are asking you to please review the draft version of the Plan and share your comments with us by September 17, 2021. The plan and survey for your comments can be found at www.scoe.org/hazardmitigation. You are not required to provide your personal information but it will be helpful if you are requesting a response to a question.

Thank you in advance for your time and assistance with this project. We look forward to receiving your comments.

Bonnie Brown
Administrative Operations Specialist
Business Services
Sonoma County Office of Education
707-524-2628
bbrown@scoe.org

You are receiving this email because of your relationship with WRIGHT ELEMENTARY SCHOOL DISTRICT. If you wish to stop receiving email updates sent through the Blackboard service, please [unsubscribe](#).
WRIGHT ELEMENTARY SCHOOL DISTRICT | [4385 Price Ave., Santa Rosa, CA 95407](#) | 707-542-0550

Invitations to the External Agencies

External agencies listed above were invited by SCOE via email and provided with an electronic link to the SCOE website. Following is the email distributed along with both invitations to contribute to the planning process:

August 31, 2021

Subject: 2021 Multi-Jurisdictional Hazard Mitigation Plan

Dear Public Agency Official,

The Sonoma County Office of Education (SCOE) is in the process of creating a Multi-Jurisdictional Hazard Mitigation Plan (Plan). The Plan identifies a range of natural hazards with the potential to significantly impact SCOE facilities as well as all the facilities within each of the SCOE districts. The Plan provides a list of mitigation action items that will be used in the future to reduce impacts from the identified hazards.

Part of the FEMA-mandated approval process for the Plan requires sharing the document with the general public as well as external agencies (jurisdictions served, utilities, special districts) in order to solicit input during the plan writing phase. If you are not the correct person to receive this email please forward onto the more appropriate department, and if possible please use the link below to indicate that you did receive this email and who you forwarded it to.

We are asking you to please review the draft version of the [Plan](#) and share [your comments](#) with us by September 17, 2021. If you are not able to provide your comments by this date, we will move forward with the understanding that you do not have any concerns and you are comfortable with the Plan as it is written. FEMA requires that we record the agency you represent, your name and your job title. Please include this information with your response.

Thank you in advance for your time and assistance with this project. We look forward to receiving your comments.

[Copy of Hazard Mitigation Plan](#)

[Survey for Comments](#)

Bonnie Brown
Administrative Operations Specialist
Business Services
Sonoma County Office of Education

707-524-2628
bbrown@scoe.org

January 30, 2023

Subject: 2023 Multi-Jurisdictional Hazard Mitigation Plan

Hello,

The Sonoma County Office of Education (SCOE) has been in the process of creating a Multi-Jurisdictional Hazard Mitigation Plan (Plan) since 2020. The Plan identifies a range of natural hazards with the potential to significantly impact SCOE facilities as well as all of the facilities within each of the SCOE districts. The Plan provides a list of mitigation action items that will be used in the future to reduce impacts from the identified hazards.

Part of the FEMA-mandated approval process for the Plan requires sharing the document with the general public as well as external agencies (jurisdictions served, utilities, special districts) in order to solicit input during the plan writing phase.

We are asking you to please review the draft version of the Plan and share your comments with us by February 16, 2023. The plan and survey for your comments can be found at www.scoe.org/hazardmitigation. You are not required to provide your personal information but it will be helpful if you are requesting a response to a question.

Thank you in advance for your time and assistance with this project. We look forward to receiving your comments.

Bonnie Brown
Administrative Operations Specialist
Business Services
Sonoma County Office of Education

707-524-2628
bbrown@scoe.org

HAZUS – Study Areas

SCOE HAZUS Study Areas

North

School Districts: Cloverdale Unified School District, Geyserville Unified School District, Healdsburg Unified School District, West Side Union School District, Alexander Valley Union School District, Windsor Unified School District

SCOE Facilities: None

West

School Districts: Horicon School District, Kashia School District, Montgomery Elementary School District, Guerneville School District, Monte Rio Union School District, Harmony Union School District, Twin Hills Union School District, Sebastopol Union School District, Gravenstein Union School District, West Sonoma County High School District, Fort Ross Elementary School District, Forestville Union School District, Oak Grove Union School District

SCOE Facilities: None

Central

School Districts: Santa Rosa City Schools (includes Santa Rosa Elementary School District, Santa Rosa City High School District), Piner-Olivet Union School District, Mark West Union School District, Bellevue Union School District, Wright School District, Roseland School District, Cotati-Rohnert Park Unified School District, Bennett Valley Union School District, Rincon Valley Union School District, Kenwood School District

SCOE Facilities: Sonoma County Office of Education 5340 Skylane Boulevard, Santa Rosa; Amarosa Academy, 3261 Dutton Ave., Santa Rosa; Los Guilicos/Valley of the Moon, 542 Eliza Way, Santa Rosa; Mendocino Administration Office, 1006 Mendocino Ave, Santa Rosa; LaBath Classrooms and Administration Offices, 5860 LaBath Avenue, Rohnert Park; El Colegio, 1059 Camino Colegio, Rohnert Park

South

School Districts: Petaluma City Elementary School District, Petaluma Joint Union High School District, Sonoma Valley Unified School District, Old Adobe Union School District, Cinnabar School District, Two Rock Union School District, Liberty School District, Dunham School District, Waugh School District, Wilmar Union School District

SCOE Facilities: Sonoma Community Center 276 E. Napa Street, Sonoma; Headwaters Academy, 1355 Industrial Avenue, Petaluma

HAZUS Reports (available under separate cover)



Introduction

This Annex of the SCOE Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) details the hazard mitigation planning elements specific to the Twin Hills Union School District, as a participating jurisdiction to the 2023 Sonoma County Office of Education MJHMP. This Annex is not intended to be a standalone document but appends to and supplements the information contained in the SCOE MJHMP Base Plan document. As such, all sections of the Base Plan, including the planning process and other procedural requirements apply to and were met by this school district. This Annex provides additional information specific to Twin Hills Union School District with a focus on providing additional details on the planning process, risk assessment, and mitigation strategy.

Planning Process

In coordination with the Executive Planning Team discussed in Part 1: Planning Process of the Base Plan, district representatives followed the planning process. In addition to providing representation on the Executive Planning Team, the district representative shared hazard information and draft plans within the district. The table below indicates the steps in the planning process and the representative's involvement.

Table: District Planning Team Participation

	Research and Writing of Plan	Executive Planning Team Kick-Off Meeting: February 11 or 12, 2020	Area Planning Team Meeting: April 27 or 28, 2020	One on One Meeting with Individual Planning Entity (May 2020)	Executive Planning Team Meeting to Review and Contribute to First Draft Plan (February 11 or 25, 2021)	Distribute Second Draft Plan to General Public and External Agencies	Review Input From Public, and External Agencies of the Second Draft Plan	Submit Third Draft Plan to Cal OES/FEMA for Approval Pending Adoption	Distribute Fourth Draft Plan to General Public and External Agencies	Post Final Draft Plan in Advance of Board of Education Meetings	Present Final Draft Plan to Boards of Education at Public Meeting for Plan Adoption	Submit Proof of Adoptions to FEMA for Final Approval	Incorporate FEMA Approval into Final Plan
Agency and Name of Attendee													
Twin Hills Union School District													
Barbara Bickford, Superintendent		X		X	X	X	X		X				

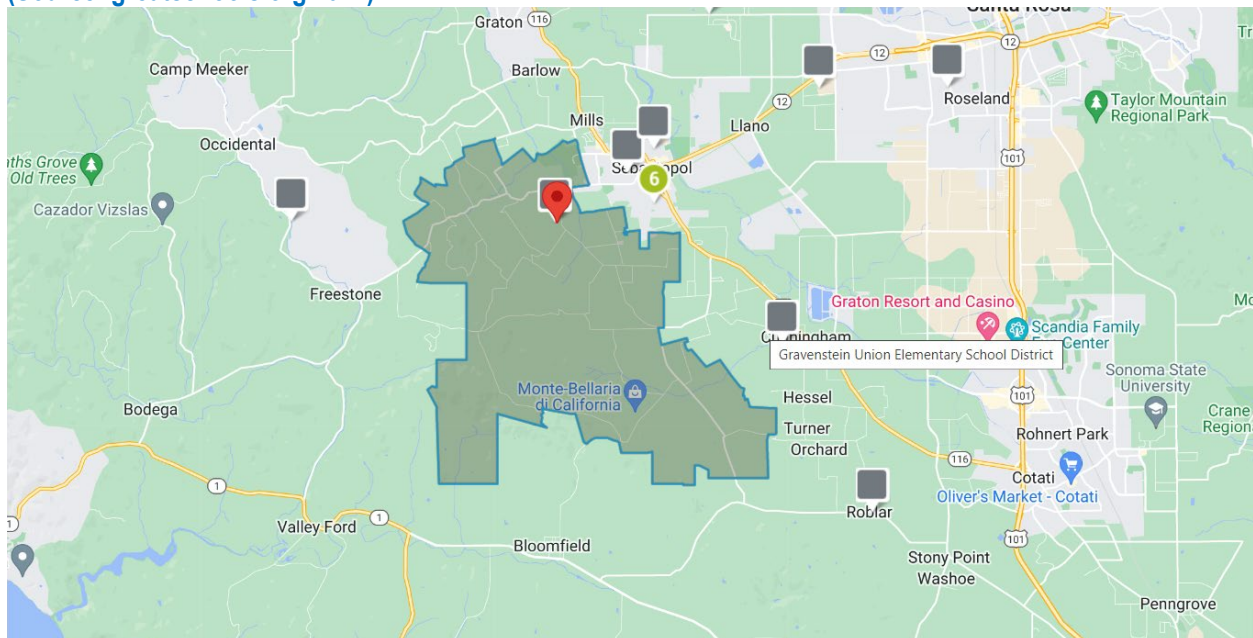


District Profile

The profile includes an overview of the district, population, geography, and climate.

According to the Local Accountability Plan and Annual Update (LCAP), Apple Blossom School is nestled in the beautiful rolling hills of western Sonoma County. The school environment is friendly, supportive, and safe for the TK-5 students. Families are welcome at school and parents are valuable partners in the education of our students. About 65% of students reside outside of the district boundaries. They commute from nearby communities. Apple Blossom serves 400 students in these student groups: 18.5% Hispanic or Latino; 71% White; 8% Two or More Races; .75% African American; .1% Asian. Generally, about 26% of students are socioeconomically disadvantaged, 2% are English Learners, and 8% students with disabilities. The rigorous and engaging academic program is enhanced by an abundance of enrichment programs including music, art, zumba, gardening, and a Maker Learning Center. A 30% guidance counselor supports students' social emotional learning. Teachers receive Toolbox training which is implemented in all classrooms to support social emotional learning. A reading teacher, EL instructional assistant, and classroom aides all work together with teachers to support the needs of unduplicated students. LexiaCore5, Dreambox, and IXL Math provide computer assisted instruction and all classrooms have iPads or Chromebooks available.

Map: District Location
(Source: greatschools.org 2022)



Overview

Twin Hills Union School District is a public school district located in the city of Sebastopol, California and includes four (4) schools, in addition to the school district offices. The school district's offices are located at 700 Watertrough Road, Sebastopol, CA 95472.



The district's assets are as follows:

# Buildings	73
Property Value	\$18,248,866
Contents Value	\$2,427,131
Total Value	\$20,675,997

Geography and Climate

According to the 2021 Sonoma County Multijurisdictional Hazard Mitigation Plan, the following information identifies the geography and climate of the project area.

Geography

The broad, flat Santa Rosa Plain, which lies between the Sonoma Mountains on the east and low coastal hills on the west, contains the cities of Santa Rosa, Rohnert Park, and Cotati. The sparsely settled coastal area of the county includes redwood and mixed conifer forests in the north and rolling oak woodland, dairy lands, and coastal prairies in the south. The Mayacamas Range forms the eastern boundary of the county. The Mayacamas and Sonoma Mountain ranges enclose the Sonoma Valley or "Valley of the Moon," which extends from near Santa Rosa southeast to the City of Sonoma and San Pablo Bay. In the north, the Mayacamas Range and Mendocino Highlands surround the farming regions of Alexander and Dry Creek Valleys. In the far northeast, the remote interior of the Mayacamas Range contains the Geysers geothermal steam field.

The topography in the county is varied and includes mountainous areas, rolling hills and broad flat river valleys, and bay flats. The valleys and foothills are predominantly in agricultural uses with some urbanized areas and with a dense population. The county contains numerous watersheds, but the Russian River is the largest and most significant, draining over 1,485 square miles as it flows south from Mendocino County to the Pacific Ocean. The Russian River is the primary water supply and a key attraction to many communities along its banks. The Petaluma River connects to San Pablo Bay and thence to the San Francisco Bay in the south. Lake Sonoma is a dam-created reservoir on Dry Creek in the northwest part of the county.

Sonoma County is on the coast of the Pacific Ocean, north of San Francisco Bay. Santa Rosa lies in the county's central valley near the junction of the Mantanzas and Santa Rosa Creeks, which flow to the west from hills that surround a large central valley (U.S. Soil Conservation Service 1972). In general, the northern half of the county is made up of small, rugged mountains that begin at the coast and rise to an elevation of 3,500 to 4,400 feet. The Russian River flows from Mendocino County in a southeasterly direction through the north-central half of Sonoma County and then turns west a few miles south of Healdsburg. Eventually, after passing through the large resort and recreational areas surrounding Guerneville and Monte Rio, this river empties into the Pacific Ocean.



The western part of the southern half of Sonoma County generally is low, rolling grassy hills at an elevation of 500 to 600 feet. The cities of Petaluma and Sonoma are in long narrow valleys in the southwestern and southeastern parts of the county, respectively. East of the Sonoma Plains and on both sides of the Sonoma Valley are grass-covered hills that rise to about 2,000 feet. Tidal flats reclaimed from the San Pablo Bay are at the lower ends of Sonoma and Petaluma Valleys and the Petaluma plains area.

Climate

Sonoma County's Mediterranean climate is characterized by a summer dry season followed by a winter rainy season, generally extending from November to April. Rainfall varies throughout the county from 70 to 20 inches annually in the north central and the southeastern sections of the county. The quantity of rainfall in the county increases with elevation, with the greatest precipitation occurring over the highest ridges. The valleys, where most of the water users are located, receive considerably less rainfall with some areas averaging just over 20 inches of precipitation annually. In the Russian River Watershed, approximately 93 percent of the annual precipitation normally falls during the wet season, October to May, with a large percentage of the rainfall typically occurring during three or four major winter storms. These major storms often come in the form of an atmospheric river, the horizontal transport of large amounts of water vapor through the atmosphere along a narrow corridor. Although brief, atmospheric rivers can produce 30 to 50 percent of the region's annual precipitation in a matter of a few days.

Except for areas immediately along the coast, the weather from May through October is generally warm and dry during the day, with peak summer day temperatures of 80° to 100° F, and relative humidity ranging between 20 and 35 percent. Gradient winds are generally out of the south/southwest at 5 to 10 mph, strengthening to 10 to 15 mph in late afternoon and diminishing by dark. Strong and dry northeast "Santa Ana" or "Foehn" winds often occur in the fall months.

Coastal onshore flow, often accompanied by fog, frequently prevails after sunset, allowing for good nighttime relative humidity recovery in the warm inland areas. In the inland valleys, fog usually dissipates by 11:00 am. Fog in the county usually is seen at elevations between 1,000 and 1,500 feet. Elevations above this often do not experience fog or receive the same nighttime cooling and moisture recovery as lower elevations.

Hazard Map

Utilizing California's "MyHazards" online hazard mapping resource, the following map identifies earthquake, flooding, liquefaction, and wildfire threats. MyHazards was designed by the State of California as a tool for the general public to discover hazards in their area (earthquake, flood, fire, and tsunami) and learn steps to reduce personal risk. Using the MyHazards tool, users may enter an address, city, zip code, or may select a location from a map. The map targets the location and allows users to zoom and scroll to their desired view. The screen then presents information on the risks identified within the search radius, and recommended actions. MyHazards website performs best when using Internet Explorer. Hazard Data is approximate and data layer visibility are subject to the extent of the Map. To access MyHazards to create a map of your own, follow the link to MyHazards (<https://myhazards.caloes.ca.gov/>).

Below is the MyHazards map prepared for the Twin Hills Union School District.



Map: MyHazards for Twin Hills Union School District
(Source: Cal OES 2022)



TsunamiHazardAreas_July2021



Liquefaction Zone of Required Investigation



Liquefaction Zone Area

Earthquake Fault Zone of Required Investigation



State Responsibility Areas (2007), Severity



SRA, Very High



SRA, High



SRA, Moderate

100-Year Floodplains



FEMA/DWR Awareness/Regional Studies /USACE Comprehensive Study

The State Responsibility Area (SRA) is the area of the state where the State of California is financially responsible for the prevention and suppression of wildfires. SRA does not include lands within city boundaries or in federal ownership. FEMA's Flood Map Service Center (<https://msc.fema.gov/portal/>)



Hazard Identification and Profile

The SCOE Executive Team identified hazards posing a significant threat to the entire project area (Sonoma County). That determination was based on reviewing the State Hazard Mitigation Plan and the 2021 Sonoma County Multijurisdictional Hazard Mitigation Plan. After a review of each of the hazards from both plans, the Executive Team chose to omit climate change, severe weather, and sea level rise. (See Base Plan – Risk Assessment for discussion on the omissions)

In summary, the Executive Team identified the project area hazards as: earthquake, flood, landslide, wildfire, tsunami, epidemic/pandemic/vector-borne diseases, and utility related.

Next, the Executive Team utilized a hazard ranking tool known as the Calculated Priority Risk Index. As a whole, the Executive Team completed a CPRI for the project area. The CPRI instructions, key, and results are located in the Base Plan – Risk Assessment. The Base Plan also includes a hazard assessment for each of the identified hazards including hazard identification, previous occurrences, local conditions, impacts, and vulnerabilities.

Then, each of the district representatives was provided a list of the identified hazards, a copy of the project area CPRI, instructions, and index key to complete a district-specific CPRI with the assistance of district staff.

The results were used to prioritize hazard rankings (high, medium, and low) which drove development of the District's Mitigation Actions Matrix (located at the end of the Annex).

Following is the Twin Hills Union School District-specific CPRI and the CPRI Index Key which explains the rating system:

Table: Twin Hills Union School District CPRI

Hazard	Probability	Weighted 45% (x.45)	Magnitude Severity	Weighted 30% (x.3)	Warning Time	Weighted 15% (x.15)	Duration	Weighted 10% (x.1)	CPRI Total	Priority Ranking (H-High, M-Medium, L-Low) *
Earthquake	3	1.35	2	0.60	4	0.60	1	0.10	2.65	M
Flood	1	0.45	1	0.30	1	0.15	1	0.10	1.00	N/A
Landslide	1	0.45	1	0.30	1	0.15	1	0.10	1.00	N/A
Wildfire	1	0.45	1	0.30	1	0.15	1	0.10	1.00	N/A
Tsunami	1	0.45	1	0.30	1	0.15	1	0.10	1.00	N/A
Utility Related	4	1.80	3	0.90	4	0.60	2	0.20	3.50	H
Epidemic / Pandemic / Vector-Borne Diseases	2	0.90	4	1.20	1	0.15	4	0.40	2.65	H

* **Rankings:**

High = CPRI score for probability + magnitude/severity (impact) = 6 or higher

Medium = CPRI score for probability + magnitude/severity (impact) = 5

Low = CPRI score for probability + magnitude/severity (impact) = 3 or 4

N/A = CPRI score for probability + magnitude/severity (impact) = 2



Following is the Index Key used to determine risk:

Table: Calculated Priority Risk Index Key

CPRI Category	Degree of Risk			Assigned Weighting Factor
	Level ID	Description	Index Value	
Probability	Unlikely	Extremely rare with no documented history of occurrences or events. Annual probability of less than 1 in 1,000 years.	1	45%
	Possibly	Rare occurrences. Annual probability of between 1 in 100 years and 1 in 1,000 years.	2	
	Likely	Occasional occurrences with at least 2 or more documented historic events. Annual probability of between 1 in 10 years and 1 in 100 years.	3	
	Highly Likely	Frequent events with a well-documented history of occurrence. Annual probability of greater than 1 every year.	4	
Magnitude/ Severity	Negligible	Negligible property damage (less than 5% of critical and non-critical facilities and infrastructure). Injuries or illnesses are treatable with first aid and there are no deaths. Negligible loss of quality of life. Shut down of critical public facilities for less than 24 hours.	1	30%
	Limited	Slight property damage (greater than 5% and less than 25% of critical and non-critical facilities and infrastructure). Injuries or illnesses do not result in permanent disability, and there are no deaths. Moderate loss of quality of life. Shut down of critical public facilities for more than 1 day and less than 1 week.	2	
	Critical	Moderate property damage (greater than 25% and less than 50% of critical and non-critical facilities and infrastructure). Injuries or illnesses result in permanent disability and at least 1 death. Shut down of critical public facilities for more than 1 week and less than 1 month.	3	
	Catastrophic	Severe property damage (greater than 50% of critical and non-critical facilities and infrastructure). Injuries and illnesses result in permanent disability and multiple deaths. Shut down of critical public facilities for more than 1 month.	4	
Warning Time	> 24 hours	Population will receive greater than 24 hours of warning.	1	15%
	12–24 hours	Population will receive between 12-24 hours of warning.	2	
	6-12 hours	Population will receive between 6-12 hours of warning.	3	
	< 6 hours	Population will receive less than 6 hours of warning.	4	
Duration	< 6 hours	Disaster event will last less than 6 hours	1	10%
	< 24 hours	Disaster event will last less than 6-24 hours	2	
	< 1 week	Disaster event will last between 24 hours and 1 week.	3	
	> 1 week	Disaster event will last more than 1 week	4	



Hazard Profile

The Base Plan – Risk Assessment described hazards by location, extent, probability, and recent occurrence. Table: Hazard Profile from the Base Plan was customized below for Twin Hills Union School District's identified hazards.

Table: Hazard Profile of Location, Extent, Probability, and Recent Occurrence for Twin Hills Union School District

Hazard	Location (Where)	Extent (How Big an Event)	Probability (How Often) *	Recent Occurrence
Earthquake	Entire District	The Southern California Earthquake Center (SCEC) in 2007 concluded that there is a 99.7 % probability that an earthquake of M6.7 or greater will hit California within 30 years. ¹	Likely	2014 – West Napa Earthquake M6.0
Utility Related	Entire District	Impacts would range from mild to severe throughout the district.	Highly Likely	2019 – Kincade Fire
Epidemic/Pandemic / Vector-Borne Diseases	Entire District	Uncontrollable virus infecting a large portion of the population with fatality rates greater than 2.0%.	Possibly	2020 – Present COVID-19 Pandemic
* Probability is defined as: Unlikely = 1:1,000 years, Possibly = 1:100-1:1,000 years, Likely = 1:10-1:100 years, Highly Likely = 1:1 year				
¹ Uniform California Earthquake Rupture Forecast				

Critical and Essential Facilities List

The Critical and Essential Facilities List was prepared for each of the district offices and facilities within the project area. Hazard maps from the 2021 Sonoma County MJHMP were used as a basis for determining whether or not a facility was located in or near a hazard. See additional language below on vulnerability to the identified hazards.

Table: Hazard Proximity to Critical and Essential Facilities
(Source: Emergency Planning Consultants)

Y – Yes, area is within hazard zone

N – No, area is not within hazard zone

Agency and Facility	Earthquake	Wildfire	Landslide	Flood*	Tsunami	Utility Related	Epidemic/Pandemic / Vector-Borne Diseases
Twin Hills Union School District Offices	Y	N	N	N	N	Y	Y
Apple Blossom School	Y	N	N	N	N	Y	Y
Orchard View School	Y	N	N	N	N	Y	Y
SunRidge Charter School	Y	N	N	N	N	Y	Y



Agency and Facility	Earthquake	Wildfire	Landslide	Flood*	Tsunami	Utility Related	Epidemic/Pandemic/Vector-Borne Diseases
Twin Hills Charter Middle School	Y	N	N	N	N	Y	Y

* See Base Plan for information on NFIP regulations

Summary of Vulnerability

The SCOE Base Plan – Risk Assessment provides a complete risk and vulnerability assessment for each of the project area hazards.

Following is a summary of vulnerability to the hazards identified as impacting Twin Hills Union School District Office, Apple Blossom School, Orchard View School, SunRidge Charter School, and Twin Hills Charter Middle School including a total of approximately 124 occupants, 73 buildings, and property/content valued at \$20,675,997. Note: these estimates are based on 2023.

Earthquake

- School and administrative buildings are built to withstand strong earthquakes. Non-structural hazards can still cause serious injury and damage.

Utility Related

- Child nutrition storage areas could be without generation to preserve food during power outages.
- Power outage could impact functionality of systems and infrastructure.
- Severe drought conditions could compromise water supply and quality.

Epidemic / Pandemic / Vector-Borne Diseases

- Future outbreaks like COVID-19 can take place in the future.
- Social distancing could require remote learning.
- Illness could limit availability of students and staff.

Mitigation actions are located at the end of this Annex that directly address these vulnerabilities.

Capability Assessment

The district will incorporate mitigation planning as an integral component of daily operations. This will be accomplished through the leadership of the district representative in coordination with district departments involved in integrating mitigation strategies into their planning documents and operational guidelines. FEMA identifies four types of capabilities (see Base Plan for definitions of the four capabilities):

- ✓ Planning and Regulatory
- ✓ Administrative and Technical
- ✓ Financial
- ✓ Education and Outreach

The table below includes a broad range of capabilities within the district to successfully accomplish mitigation.



Table: Capability Assessment for Twin Hills Union School District

Type of Capability				Name of Capability	Capability Description and Ability to Support Mitigation
Planning & Regulatory	Administrative & Technical	Financial	Education & Outreach		
Departments					
X	X	X	X	Superintendent	The Superintendent is instrumental in facilitating the implementation of the Mitigation Actions Matrix. This includes managing communications with parents and staff providing an excellent medium for educating the community on hazards and mitigation activities.
X	X	X	X	Board of Trustees	The Board of Trustees is responsible for governing and overseeing the management of the public schools of the district. The Board may adopt rules and bylaws necessary to carry out these powers and duties. The Board may be assigned to approve many of the Mitigation Actions as they are implemented. The Board meetings are open to the public making it an excellent medium for informing attendees on mitigation related activities.
X	X	X		Facilities	Facilities has the responsibility to provide the best possible facility-related environment for students and staff. This involves the continuous assessment of the needs of the schools and the development of plans to meet those needs. In addition, Facilities works to identify all available fund sources required to make significant capital improvements for the campuses. Working closely with our architects and engineers, Facilities develops detailed plans and specifications which must meet very stringent requirements. Facilities can immediately incorporate many of the Mitigation Action into building designs. Also, Facilities will share new mitigation-related building standards with the MJHMP Planning Team for inclusion in future updates to the plan. Facilities is assigned to carry out all of the Mitigation Actions identified in the 2023 District Annex.
	X	X		Business Services	Provides administrative direction and evaluation to all major business functions including fiscal and payroll, bond programs, and support collective bargaining functions as required. Will be instrumental in seeking and administering grants and other funding mechanisms critical to the implementation of the plan.
	X			Human Resources	Provides administrative direction and evaluation for employee recruitment, selection and performance management of all District personnel; collective bargaining and contract management; and administration of health and welfare benefits and Workers' Compensation.
	X		X	Technology Services	Plans, organizes, controls and directs the District's Technology program in support of future ready classrooms and student centered learning environments; assists with the selection and implementation of computing platforms, mobile devices and applications, and related technology for the District's instructional



Type of Capability				Name of Capability	Capability Description and Ability to Support Mitigation
Planning & Regulatory	Administrative & Technical	Financial	Education & Outreach		
					and administrative needs; provides leadership in the development of information management systems, network services, voice and data applications, cloud services, mobile device management and instructional technology; and performs related work as required.
Plans and Programs					
X	X	X	X	Annual Budget	The Annual Budget and its associated review, update, and approval process provide a plethora of opportunities to explain detailed tasks, priorities, and spending allocations for the projects, programs, and equipment supporting the efforts of the district. Many of the District's ongoing Mitigation Actions are supported through the Annual Budget.
	X		X	Comprehensive School Safety Plan (CSSP)	The CSSP consists of several components, including identifying hazards. The document is updated each year in compliance with state regulations and made available to the staff, parents and general public.
	X		X	Emergency Response Plan (ERP)	The ERP for the district identifies hazards and related response protocols. Various assignments are identified in the ERP which are assigned to staff. Training and exercises assist in informing the staff of their roles as well as sharing information about the various hazards.

Expanding and Improving District Capabilities

Planning and Regulatory Capabilities – The District builds and maintains its own buildings and infrastructure according to the CDE “Field Act”. Future plans are laid out in the Facilities Maintenance Plan. The funding of future construction often relies on successful bond measures where plans and justifications are shared with the public. Given the fact this is the first mitigation plan for SCOE, the topic of mitigation has been limited to Environmental Impact Reports tied to major development projects. Although mitigation is new, schools are highly experienced in adhering to federal, state, and local mandate, and comply with a wide array of reporting requirements pertinent to school operations and student performance. That well-practiced experience positions the school’s community as prepared to participate and respond as mitigation weaves itself into the school culture. Once complete, the MJHMP will be shared with the Sonoma County Office of Emergency Services which will result in more effective emergency planning. With all of the county’s school district under one umbrella in the MJHMP, SCOE will take a more active role in coordinating and planning for all of the schools.

Administrative and Technical –

Existing District capabilities are limited. Grant writing capabilities will be especially important once the mitigation plan is approved by FEMA. That approval will trigger eligibility for a range of federal



and state grants. Also, the Board of Trustees could form a sub-committee dedicated to land use matters and mitigation plan implementation. The Plan's opportunities for success will be increased by the Board's involvement. Perhaps in the future, the District will consider adding responsibility for the Plan's implementation to the staff member tasked with maintaining and exercising the Comprehensive School Safety Plan, and Emergency Response Plan.

Finance -

School systems have a number of funding resource acquisition mechanisms that can be utilized for mitigation planning. Aside from the ability to levy taxes, charge impact fees, and initiate general obligation bonds, schools and students are favored targets for philanthropic support. And while the need for fiscal resources for the school community in Sonoma County is at an all-time high as repetitive disaster plague the region, the District knows that the outcomes that hazard mitigation planning and project execution bring are transformative in making schools operationally safer. As student and staff safety is our number one priority, the mitigation planning effort and partnership with the County will serve to prioritize funding capture efforts to meet the objectives and initiatives undertaken herein. The District envisions inter-school and inter-agency collaborations and funding applications where mutual benefits are found, as well as regular solicitation of our business, industry, and private donor partners to satisfy the financial obligations found in executing hazard mitigation activities.

Education and Outreach –

Utilize parent groups, local citizen groups, and non-profit organizations to support and encourage the District's mitigation as well as home and business mitigation. Enlist District staff in learning and talking about the MJHMP and promoting mitigation programs like StormReady and TsunamiReady.

Plan Implementation

As identified in the Base Plan, the Executive Planning Team has agreed to reconvene on a bi-annual basis to review the Base Plan and Annexes. In addition to those meetings, the district representative intends to gather a District Planning Team together on a quarterly basis to discuss the District's Mitigation Actions Matrix. The members of the District Team will represent the departments with responsibilities identified in the Mitigation Actions Matrix. See MJHMP Base Plan – Mitigation Strategies section for a description of the categories portrayed in the Matrix.

Integration with Existing Programs

The Mitigation Plan provides a series of recommendations - many of which are closely related to the goals and objectives of existing planning programs. The District's Local Mitigation Officer will be responsible for implementing recommended mitigation action items through existing programs and procedures. The district is responsible for adhering to the State of California's Field Act as administered for the State Department of Education.

Some of the goals and action items in the MJHMP will be achieved through activities recommended in the district's policy, capital, and funding documents. The MJHMP will be reviewed on a bi-annual basis during a gathering of the various Local Mitigation Officers. Upon the bi-annual review, the District's Local Mitigation Officer will work with other district departments to identify areas that the MJHMP action items are consistent with the policy, capital, and funding documents to ensure the Plan goals and action items are implemented in a timely fashion.



Upon FEMA approval, the MJHMP Executive Planning Team will begin the process of incorporating risk information and mitigation action items into existing planning mechanisms. The bi-annual meetings of the Team will provide an opportunity for Team members to report back on the progress made on the integration of mitigation planning elements into the planning documents and procedures of the various jurisdictions. Specifically, the District's Local Mitigation Officer will utilize the following sections of the Plan to make revisions to other documents within the District:

- ✓ Risk Assessment Section (Base Plan), District Profile, Planning Process (stakeholders) – Emergency Operations Plan, Facilities Maintenance Plans, FIT Reports, etc.
- ✓ Mitigation Actions Matrix – Capital Projects, Grants, Bonds



Mitigation Actions Matrix

Mitigation Action Item	Coordinating Agency	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source and Planning Mechanism: GF- General Fund, FMP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High
MULTI-HAZARD ACTION ITEMS												
MH-1 Notification System Apple Blossom and Orchard View School (shared campus) To include bells, alarms, phones, etc.	Business Manager	1 year	X			X			FMP, HMGP, BRIC	H	H	H
MH-2 Notification System Twin Hills Charter Middle School To include bells, alarms, phones, etc.	Business Manager	1 year	X			X			FMP, HMGP, BRIC	H	H	H
MH-3 Smoke – Inspect and replace all HVAC systems at all District Schools	Business Manager	1 year	X			X			FMP, HMGP, BRIC	H	H	H
MH-4 Repair and replace all plumbing that can be impacted by earthquake, torrential rains, and landslides.	Director of Maintenance	5 years	X			X			FMP, HMGP, BRIC	H	H	H
MH-5 Landscaping Remove trees that may be impacted by landslide, rains, earthquake.	Director of Maintenance	1 year	X			X			FMP, HMGP, BRIC	H	H	H
MH-6 Deferred Maintenance (Fund 14) The district was awarded an Extreme	Facilities	1-5 years	X	X	X	X	X	Y	FMP, HMGP, BRIC	H	H	H



Mitigation Action Item	Coordinating Agency	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source and Planning Mechanism: GF- General Fund, FMP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High
Hardship Grant originating in 2007-2008. In 2018-19 California Solar Initiative funds (\$145,000) received during the past 5 years from the installation of the solar panels during the summer of 2011, were transferred from the sites to this fund in order to maintain the solar panels and their safe operation. Due to LCFF, these funds are now included in that calculation and the district is responsible for transferring revenue to this fund based on site needs. Projects are identified and vetted by the Superintendent and Site Administrators. This list of projects is approved by the board annually resulting in these funds being committed. (Source – Budget)												
MH-7 Bond Fund (Fund 21) In 2010-12 a large percentage of funds were spent on the solar project, modular project, at THCMS, MUR upgrades at THCMS	Facilities	1-5 years	X	X	X	X	X	Y	FMP, HMGP, BRIC	H	H	H



Mitigation Action Item	Coordinating Agency	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source and Planning Mechanism: GF- General Fund, FMP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High
including a lighting and sound system, and energy efficient lighting at both campuses. In 2012-13 and 2013-14 the Orchard View Portable project and the District Technology Infrastructure project (Structured Cable Plan) were completed. Currently the budgeted expenses are for the annual audit. These funds can only be used for Measure M approved projects. (Source – Budget)												
MH-8 Capital Facilities Fund (Fund 25) This fund is used to collect the revenue generated through developer fees. This fund pays the District's portion of the cost of the bus facility operated by the West County Transportation JPA. Due to the addition of a new bus yard and buildings, we have budgeted another \$10,000 for this year and expect the actual annual amount to become steady at some point this year. Any balance in	Facilities	1-5 years	X	X	X	X	X	Y	FMP, HMGP, BRIC	H	H	H



Mitigation Action Item	Coordinating Agency	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source and Planning Mechanism: GF- General Fund, FMP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High
this fund is used for capital projects. This balance is assigned for use on building and site improvements only. (Source – Budget)												
MH-9 Special Reserve for Capital Projects (Fund 40) This fund is used to accumulate funds to be used for capital improvements or equipment purchases. The budget includes a transfer of \$50,000 from the general fund. The balance will only be used for site or building improvements or equipment costing over \$5,000. (Source – Budget)	Facilities	1-5 years	X	X	X	X	X	Y	FMP, HMGP, BRIC	H	H	H
MH-10 Routine Repair and Maintenance: When a District agrees to receive funding for modernization projects under specific propositions, it is annually required to transfer 3% of the unrestricted adopted budget to the Routine Repair and Maintenance Account (RRMA), a restricted resource.	Facilities	1-5 years	X	X	X	X	X	Y	FMP, HMGP, BRIC	H	H	H



Mitigation Action Item	Coordinating Agency	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source and Planning Mechanism: GF- General Fund, FMP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High
The reason the state made this requirement is to ensure that Districts will be able to maintain these modernized facilities for 20 years. (Source – Budget)												
MH-11 Annually update the Facilities Inspection Tool (FIT).	Facilities	Ongoing	X	X	X	X	X	Y	GF	H	L	H
MH-12 Provide annual briefing to the campus Emergency Response Team on the results of the Facilities Inspection Tool. A “heads up” on vulnerabilities will help them to assess damages more efficiently.	Facilities	Ongoing	X	X	X	X	X	Y	GF	H	L	H
EARTHQUAKE ACTION ITEMS												
EQ-1 Replace critical pipeline with flexible piping in all underground systems at Apple Blossom/Orchard View and Twin Hills Campus.	Business Manager	3 years	X			X			FMP, HMGP, BRIC	H	H	H
EQ-2 Seismically retrofit all buildings at Apple Blossom/Orchard View and Twin	Business Manager	3 years	X			X			FMP, HMGP, BRIC	H	H	H



Mitigation Action Item	Coordinating Agency	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source and Planning Mechanism: GF- General Fund, FMP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High
Hills Campus and bracing where needed.												
EQ-3 Evaluate stability of all portables and replace, as needed, with permanent structures.	Business Manager	5 years	X			X			FMP, HMGP, BRIC	H	H	H
EQ-4 Conduct seismic inventory of facilities and inspect integrity of non-structural devices.	Facilities	1-5 years	X	X	X	X	X	Y	FMP, HMGP, BRIC	H	H	H
EQ-5 Based on the results of the seismic inventory, retrofit or rebuild as necessary.	Facilities	1-5 years	X	X	X	X	X	Y	FMP, HMGP, BRIC	H	H	H
EPIDEMIC/PANDEMIC/VECTOR-BORNE DISEASES ACTION ITEMS												
EPV-1 Clean and safe buildings and grounds: Purchase appropriate cleaning supplies and devices to include electrostatic sprayers, hand washing stations at all schools, masks, gloves, plastic separators, thermometers, signage, and educate entire school community	Director of Maintenance	1 year	X	X		X			FMP, HMGP, BRIC	H	H	H



Mitigation Action Item	Coordinating Agency	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source and Planning Mechanism: GF- General Fund, FMP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High
EPV-2 Upgrade HVAC units in order to be compliant with present-day energy standards.	Facilities	1 year	X	X	X	X	X	Y	FMP, HMGP, BRIC	H	H	H
EPV-3 Install automatization devices/openers to decrease surface contact (doors, fountains, etc.).	Facilities	1 year	X	X	X	X	X	Y	FMP, HMGP, BRIC	H	H	H
UTILITY RELATED ACTION ITEMS												
UT-1 Due to frequent power shut off events of longer duration: Supply energy Storage system at Apple Blossom/Orchard View and Twin Hills Charter Middle School.	Business Manager	1 year	X			X			FMP, HMGP, BRIC	H	H	H
UT-2 Research and purchase generators suitable for the campus.	Facilities	1 year	X	X	X	X	X	Y	FMP, HMGP, BRIC	H	H	H
UT-3 Research and purchase water filtration for the campus.	Facilities	1 year	X	X	X	X	X	Y	FMP, HMGP, BRIC	H	H	H

Twin Hills Union School District

SunRidge Charter School

2023-2024 School Year Calendar

Su	M	T	W	Th	F	Sa
July						
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

August						
		1	2	3	4	5
6	7	8	9	10	11	12
13	[14]	[15]	[16]	<17>	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

September						
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

October						
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

November						
			1	[2]	[3]	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22^	23	24	25
26	27	28	29	30		

December						
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Su	M	T	W	Th	F	Sa
January						
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

February						
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

March						
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

April						
	1	2	3	4	[5]	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

May						
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

June						
						1
2	3	4	5	6	<7>	8
9	[10]	[11]	[12]	[13]	[14]	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

Date	Event
July 4	Independence Day
August 14	Professional Development - District & Site
August 15 & 16	Teacher Workdays
August 17	First Student Day
September 4	Labor Day
October 9	Indigenous People's Day
November 2 & 3	Parent Teacher Conferences
November 10	Veterans Day Observed
November 20-24	Thanksgiving Break
December 25-31	Winter Break
January 1-5	Winter Break

Date	Event
January 15	Martin Luther King Jr. Day
February 12	Lincoln Day
February 19	Presidents Day
March 18-29	Spring Break
April 1	Local Holiday (For Emergencies)
April 5	Kinder Conferences/Prof Dev
May 24	Local Holiday (For Emergencies)
May 27	Memorial Day Observed
June 7	Last Student Day
June 10-14	Teacher Workdays & Prof Dev
June 19	Juneteenth

Legend:

italic/bold = Early Release is every Thursday beginning August 17 and ending June 6. Grades 1-3 out @ 12:55pm, Grades 4-8 out @ 1:05pm
 Early Release is every Thursday, **AND** 8/18, 11/01, 12/22, 3/15, and 6/7 (11/17 is a full day)
<Bold> = First/Last Student Days **[Bold]**=Teacher Workdays / Non-Student Days **Bold** = School Holidays and Breaks

Charter Council Approved : 4/26/2023

Board Adopted:

**RESOLUTION #2023-565
BEFORE THE BOARD OF TRUSTEES OF THE
TWIN HILLS UNION SCHOOL DISTRICT**

RESOLUTION TO ESTABLISH TEMPORARY INTERFUND TRANSFERS

ON MOTION of Member _____, seconded by Member _____, the following resolution is hereby adopted:

WHEREAS, the governing board of any school district may direct that moneys held in any fund or account may be temporarily transferred to another fund or account of the district for payment of obligations as authorized by Education Code Section 42603; and

WHEREAS, the transfer shall be accounted for as temporary borrowing between funds or accounts and shall not be available for appropriation or be considered income to the borrowing fund or account; and

WHEREAS, amounts transferred shall be repaid either in the same fiscal year, or in the following fiscal year if the transfer takes place within the final 120 calendar days of a fiscal year;

NOW THEREFORE, BE IT RESOLVED that the Governing Board of the Twin Hills Union School District, in accordance with the provisions of Education Code section 42603 adopts the following authorization for fiscal year 2023-24 to temporarily transfer funds between any and all funds provided that all transfers are approved by the Superintendent or their designee:

The foregoing **RESOLUTION** was duly passed and adopted at a regular meeting of the Board of Trustees of the **TWIN HILLS UNION SCHOOL DISTRICT** on the 11th day of May 2023, by the following vote:

AYES: _____	<u>Board Members</u>	<u>Vote</u>
	Terry Beck	_____
NOES: _____	Melissa Bechtel	_____
	Jeff Harding	_____
ABSENT/	John Moise	_____
ABSTAIN: _____	Michael Ost	_____

Dated this 11th day of May, 2023

President, Board of Trustees

I, Clerk/Secretary of the Board of Trustees of the Twin Hills Union School District, do hereby certify that the foregoing resolution is a true copy and was regularly introduced, passed and adopted by the Board of Trustees of the Twin Hills Union School District at its meeting held May 11, 2023.

Clerk/Secretary, Board of Trustees

**BEFORE THE BOARD OF TRUSTEES OF THE
TWIN HILLS UNION SCHOOL DISTRICT
SONOMA COUNTY, CALIFORNIA**

RESOLUTION #2023 - 564

In the Matter of the Decision)
To Release Administrative)
Certificated Employees)

RESOLUTION OF FINAL RELEASE FROM
CERTIFICATED ADMININSTRATIVE
ASSIGNMENT

WHEREAS, Education Code section 44951 authorizes this Board of Trustees to give notice to a certificated employee serving in a certificated administrative position that he/she shall be released from his/her position for the following school year.

WHEREAS, Karen (Ertel) Fuko ("Employee"), is a certificated administrative employee whose position is SunRidge Interim Principal/Director in this District;

WHEREAS, the Board of Trustees has received a recommendation from the District Superintendent not to reemploy Employee in the same position for the 2023-2024 school year;

WHEREAS, the Board of Trustees has discussed the recommendation made by the Superintendent and concurs in said recommendation.

NOW, THEREFORE, BE IT RESOLVED that the Board of Trustees hereby authorizes the District Superintendent or the Superintendent's designee to notify Employee before May 15, 2023, in accordance with the requirements of Education Code section 44951, that he/she shall not be reemployed as a certificated administrative employee for the 2023-2024 school year. The District Superintendent or the Superintendent's designee is further authorized to take any other actions necessary to affect the intent of this Resolution.

This Resolution was adopted at a duly noticed meeting of the Board of Trustees held on March 9, 2023.

AYES: _____	<u>Board Members</u>	<u>Vote</u>
	Terry Beck	_____
NOES: _____	Melissa Bechtel	_____
	Jeff Harding	_____
ABSENT/	John Moise	_____
ABSTAIN: _____	Michael Ost	_____

President, Board of Trustees

I, Clerk/Secretary of the Board of Trustees of the Twin Hills Union School District, do hereby certify that the foregoing resolution is a true copy and was regularly introduced, passed and adopted by the Board of Trustees of the Twin Hills Union School District at its meeting held May 11, 2023.

Clerk/Secretary, Board of Trustees