

PERSONALIZING THE CONSUMER EXPERIENCE

INTERACTIVE AND PERSONALIZED FEATURES

MARK CORL, TRIVENI DIGITAL

GREG JARVIS, FINCONS

SO VANG, NAB

PETE VAN PEENAN, PEARL TV



nextgentv **SUMMIT**

Produced by SMPTE and SBE with support from the NAB and ATSC



and the support of our host, WETA Television



JANUARY 16, 2020



Event Recording courtesy of the following sponsors:

The Telestream logo, which consists of a blue arc above the word "telestream" in a lowercase, black, sans-serif font.

telestream

The Panasonic logo, featuring the word "Panasonic" in a bold, blue, sans-serif font.

Panasonic



With the support and generosity of the following sponsors:



JANUARY 16, 2020



THANK YOU TO THE SMPTE DC, SBE AND NAB TEAM
MEMBERS WHO PRODUCED THIS EVENT

Fred Willard Univision

Rick Singer Singer Media Engineering

Skip Pizzi NAB

Tom Hackett Diversified Systems

Melissa Davis Evertz

Louise Shidler Chesapeake Systems

Maciej Ochman CPB

James Snyder US Library of Congress

Nephi Griffith BMG

Greg Smalfelt Ch 16 Fairfax

Alex Snell BCI Digital

Peter Wharton Happy Robotz

WITHOUT THEIR VOLUNTEER EFFORTS THIS SUMMIT WOULD NOT BE POSSIBLE

Morning Program



Afternoon Program

8:00 AM - 9:00 AM	Registration and continental breakfast
8:55 AM - 9:00 AM	Welcome from SMPTE, SBE and AES Fred Willard, SBE Washington Kishore Persaud, SBE Baltimore
9:00 AM - 9:05 AM	Introduction Peter Wharton, SMPTE Membership VP Chris Lane, Chief Engineer, WETA
9:05 AM - 9:35 AM	NextGen TV: Transforming the Consumer Experience Lynn Claudy, SVP Technology, NAB and Chairman, ATSC Board of Directors Madeleine Noland, President, ATSC
9:35 AM - 10:00 AM	Creating New Opportunities with NextGen TV Joonyoung Park, VP and Fellow, DigiCAP
10:00 AM - 10:35 AM	Improved Television Reception for Consumers <i>Implementing NextGen TV Distribution Systems</i> John Lynch, ERI Jeff Andrew, Osborn Engineering
10:35 AM - 11:15 AM	Benefits of a Converged Broadcast and IP Platform Lynn Claudy, SVP Technology, NAB and Chairman, ATSC Board of Directors Content Reception Enhancements Richard Lhermitte, VP Solutions and Market Dev, ENENSYS TeamCast
11:15 AM - 11:30 AM	Morning Break
11:30 AM - 11:50 AM	Consumer Applications for Combined 5G & NextGen TV Networks Josh Arensberg, M&E Business Development, Verizon Media
11:50 AM - 12:15 PM	Case Study: Hybrid Services at "Chicago 3.0" Jean Macher, Harmonic
12:15 PM - 01:20 PM	Buffet Lunch

01:25 PM - 01:45 PM	Protecting the NextGen TV Consumer <i>Advanced EAS and AWARN Capabilities</i> John McCoskey, SpectraRep
01:45 PM - 02:15 PM	Monetizing the NextGen TV Consumer <i>Addressable Advertising and Analytics</i> Rick Ducey & Mark Fratrik, BIA
02:20 PM - 03:20 PM	Personalizing the Consumer Experience <i>Interactive and Personalized Features</i> Mark Corl, Triveni Digital Greg Jarvis, Fincons So Vang, NAB Pete Van Peenan, Pearl TV
03:25 PM - 03:40 PM	Afternoon Break
03:40 PM - 04:10 PM	The Consumer Out-of-Home Experience <i>Mobile & Automotive Applications and FeMBMS (5G Broadcast)</i> Thomas Janner, Product Management & R&D Director, Rhode & Schwarz
4:10 PM - 4:35 PM	The ATSC 3.0 Roadmap Lynn Claudy, SVP Technology, NAB and Chairman, ATSC Board of Directors Madeleine Noland, President, ATSC
4:35 PM - 5:00 PM	The Consumer Technology Roadmap Brian Markwalter, SVP Research and Standards The Consumer Technology Association
5:00 PM - 6:00 PM	Station Group and Industry Deployment Plans <i>Advanced Capability Implementation Strategies</i> Skip Pizzi, VP Technology Education & Outreach, NAB (Moderator) Michael Bouchard, VP Technology Strategy, ONE Media / Sinclair Stacey Decker, CTO, Public Media Group Sasha Javid, COO, The Spectrum Co
6:00 PM - 8:00 PM	Cocktail Reception Busboys and Poets 4251 S. Campbell Ave.,Shirlington <i>Heavy Hors d'oeuvres and open bar</i>

ATSC 3.0 AEA in Context

- ATSC creates standards and recommended practices for terrestrial broadcast emissions
- ATSC 3.0 Advanced Emergency InformAtion (AEA) is not intended to replace current FCC emergency messaging regulations or industry practices
- It is expected that stations will fulfill their obligations regarding EAN in the same way as with ATSC 1.0
 - ➔ Stations that employ “burned in” banners and audio for non-EAN emergency messages will continue with that practice
- AEA is ***optional*** and is supplemental to today’s practices
- ATSC 3.0 AEA system enables broadcasters to deliver timely, in-depth emergency-related information, which can strengthen the connection between the community and the station and provide critical information in times of need

ATSC 3.0 AEA Features

Wake-up Field

- Carried in the Bootstrap allowing receivers in stand-by mode to monitor for AEA messages

Advanced Emergency informAtion Table – AEAT

- Signals “everything the receiver needs to know” about the AEA message and associated rich media

Interactivity

- HELD table signals receivers to manage Broadcaster Applications (BA)
- Apps run in ATSC 3.0 Runtime Environment and can access AEAT info and rich media

Watermarks

- Enable critical information to traverse legacy ecosystems

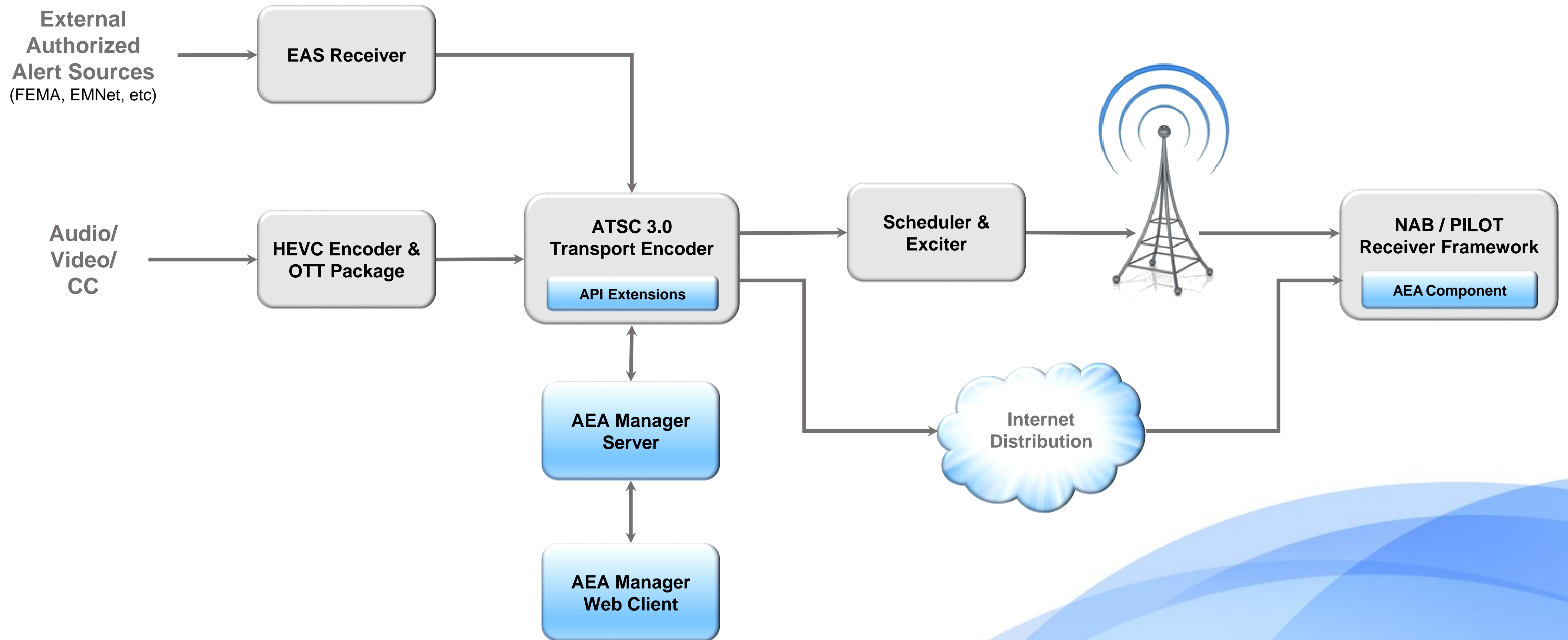
AEA Template Manager



Proof-of-Concept project funded by NAB PILOT

- ➔ Goal: Create APIs and Open Source Software to demonstrate concepts and expose issues
 - Enable workflow to manage AEA Templates consistent with Look and Feel / Interactivity AWARN User Experience recommendations
 - AEA triggering based upon active AEAT and associated media
 - Ability to enhance / preview Templates with augmented media / live feeds
 - Template and associated configuration / media files delivery in-band with corresponding transport

AEA Manger Architecture



AEA Manager

Encoder connection: **OK**
Server connection: **OK**

Transports

ATSC3 TS 'A'

ATSC3 TS, TRI: 5-1

Splash Page

Live Coverage

Details Page 2

Details Page 3

Media

Some File

fire

KEYT Feb3

Evacuation Map

Shelters

System

Logs



! ALERT: Debris Flow Risk for Santa Barbara Count

Clear

EVACUATION ORDER FOR RISK AREAS

Clear

Live Coverage

Dismiss



Show Outlines



Button Name

AEA Manager

Transports

ATSC3 TS

ATSC3 TS, TRI: 5-1

Splash Page

Live Coverage

Details Page 2

Details Page 3

Media

Some File

fire

KEYT Feb3

Evacuation Map

Shelters

System

Logs

Clear

EVACUATION ORDER FOR RISK AREAS

Clear

Shelter location:
Goleta Valley
Community Center,
5679 Hollister Ave

Road Closures:
Hwy 101 closed from
Milpas St. Santa
Barbara to Hwy 150
in Carpinteria

Twitter updates
follow:

Clear

Show Outlines

Area Count

Two

Button Name

Live Coverage



ALERT: Debris Flow Risk for Santa Barbara County

EVACUATION ORDER FOR RISK AREAS



Shelter location:
Goleta Valley Community
Center,
5679 Hollister Ave



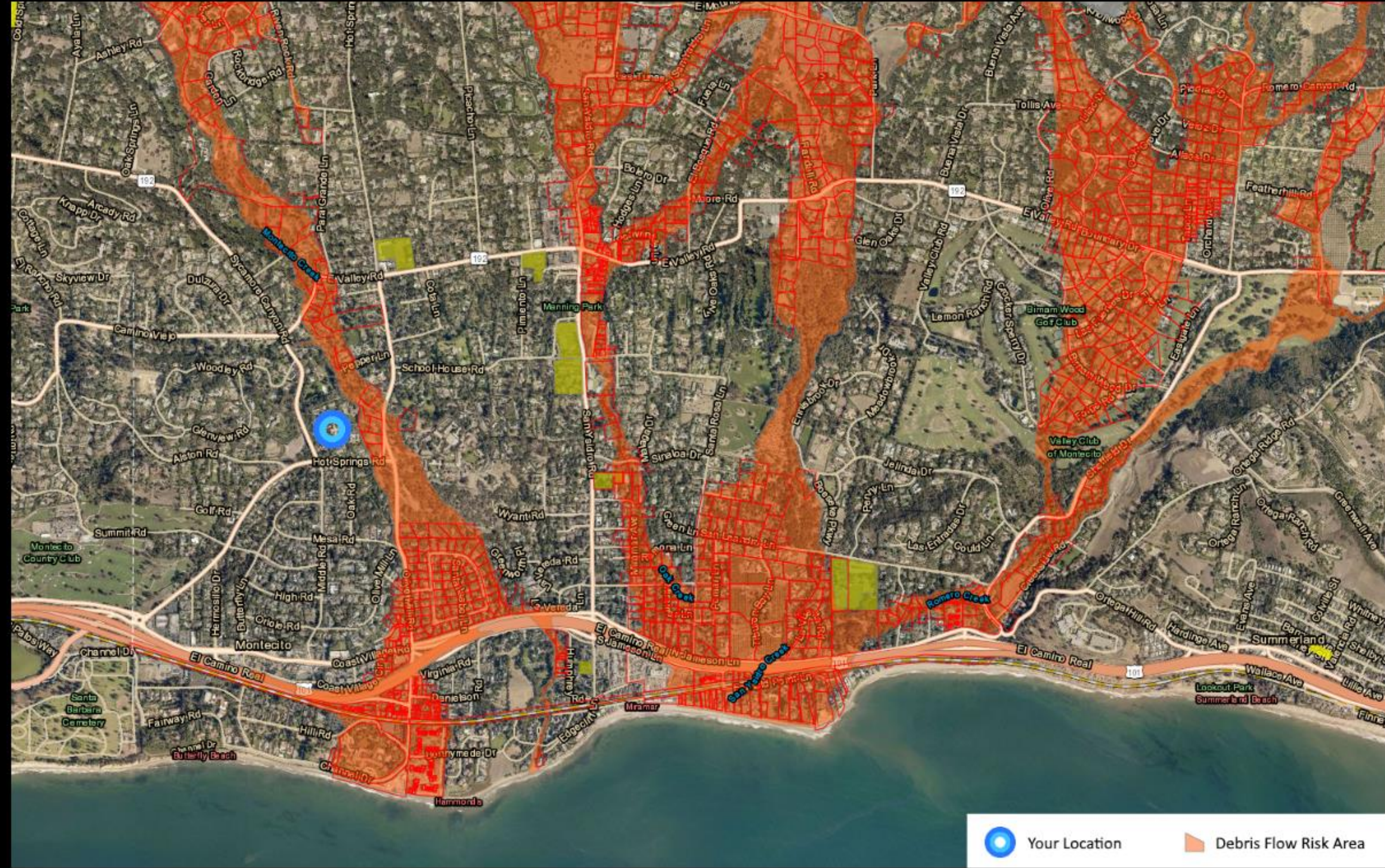
Road Closures:
Hwy 101 closed from Milpas
St. Santa Barbara to Hwy 150
in Carpinteria



Twitter updates follow:
@SBCountyOEM



Text shelter address



Live Coverage

Evacuation Map

Shelters

Dismiss

EVACUATION ORDER FOR RISK AREAS



Shelter location:
**Goleta Valley Community
Center,
5679 Hollister Ave**



Road Closures:
**Hwy 101 closed from Milpas
St. Santa Barbara to Hwy 150
in Carpinteria**



Twitter updates follow:
@SBCountyOEM



Text shelter address

[Live Coverage](#)[Evacuation Map](#)[Shelters](#)[Dismiss](#)

FROM THE SMPTE WASHINGTON DC SECTION



THANK YOU