

## **Flood Warning System Modernization**

October 11, 2022

Glenn Shephard, Director, Watershed Protection

# Ventura County Flood Warning System

The Best

#### **Flood Warning System Modernization**

- a. Flood Warning System History
- **b.** System Hardware and People
- c. Modernized Displays



# **Flood Warning System - History**

#### History

- Modern Flood Warning System Automated Local Evaluation in Real-Time (ALERT) network
- ► The first ALERT rain gage installed near Big Sur in 1978 in response to a wildfire
- Your Board implemented a Flood Warning System for Sespe Creek in 1978
- ► Late 1980's: All three of Ventura County major watersheds were covered by the ALERT system
- ▶ 2000's:
  - ► ALERT sites expanded to 148 rain and stream gages
  - Your Board authorizes Watershed Protection to be the regional So Cal ALERT II grant administrator
  - Ventura County ALERT II communication protocols nearly completed
  - Stream flow modeling expanded with model updates every 2 hours
  - Ventura County received two Flood Warning System Operational Excellence Awards in 2017 and 2018



## **Flood Warning System**

| Name             | Since | 24 Hour<br>Amount<br>at 8:00am | Rain<br>Total<br>Last 5<br>Days | Accumulated<br>Total to Date | Normal to<br>Date | Percent of<br>Normal to<br>Date | Last<br>Year<br>Rain to<br>Date |
|------------------|-------|--------------------------------|---------------------------------|------------------------------|-------------------|---------------------------------|---------------------------------|
| Camarillo - PVWD | 0.00  | 0.00                           | 0.00                            | 15.88                        | 12.79             | 124.2%                          | 6.14                            |
| Casitas Dam      | 0.00  | 0.00                           | 0.00                            | 26.20                        | 22.84             | 114.7%                          | 9.94                            |

#### Casitas Station El Rio - UWCD VCPWA-WP - Rainfall Intensity Report

#### Fillmore Sanitatio

Note: These readings are considered preliminary and are subject to change. Lake Piru - Piru 2018 Woolsey Burn Area Lake Sherwood 24 Hour Data Ending At: 02/02/2019 15:00 Lockwood Valley Current Last 24 Hours USGS Current Last 24 Hours USGS Current Last 24 Hours USGS Matilija Canyon Period Rain Max Date/Time Threshold Period Rain Max Date/Time Threshold Period Rain Max Date/Time Threshold public.forecast\_inundation/vcahps/postgres@WPD-M92186 Moorpark - Coun H232 - Deals Flat 15 Minutes 0.00 0 Query Editor Query History Oak View 0 Minutes SELECT - FROM public.forecast\_inundation Ojai - APCD RAV 1 Hour 0.04 0.09 Upper Ojai Sumn Hours 3 Hours 0.16 Oxnard - Civic C Data Output Explain Messages Notifications Geometry Viewer H280 - Circle X Rancł Piru - APCD RAV 15 Minutes 0.00 Port Hueneme -1 Hour 0.12 Sanitation PUBLIC Watershed Protection 2 Hours 0.16 Santa Paula 3 Hours 0.20 WORKS @vcwatershed H281 - Oak Park Fire Saticoy - County #VRVC1 Ventura R @ Foster Float above 19.27 ft @ 15 Minutes 0.00 Seacliff 11:10 Nearing 18,000 cfs for flooding of agricultural Simi Valley - San 1 Hour 0.00 fields near Main St #VenturaRiver Susana Hours 0.12 B Hours Thousand Oaks 11:10 AM · Feb 2, 2019 from Casitas Springs, CA · WPD Flood Warning H513 - Rancho Sierra Ventura - City Ha 15 Minutes 0.00 Ventura - County 1 Hour 0.00 Center Hours 0.00 3 Hours 0.08 H121 - Lake Sherwoo 15 Minutes 0.03 30 Minutes Ventura Beach RV Resort Story 1 Hour 0.03 2 Hours 0.07 3 Hours 0.11 CA 232



# Rain Gauge at 'Last Chance'



# Rain/Weather Gauge south of 'Lockwood Valley'



# **'Sandstone' Signal Repeater Replacement – Santa Monica Mtns**





# **Stream Flow Radar Gauge Santa Clara River at Victoria**

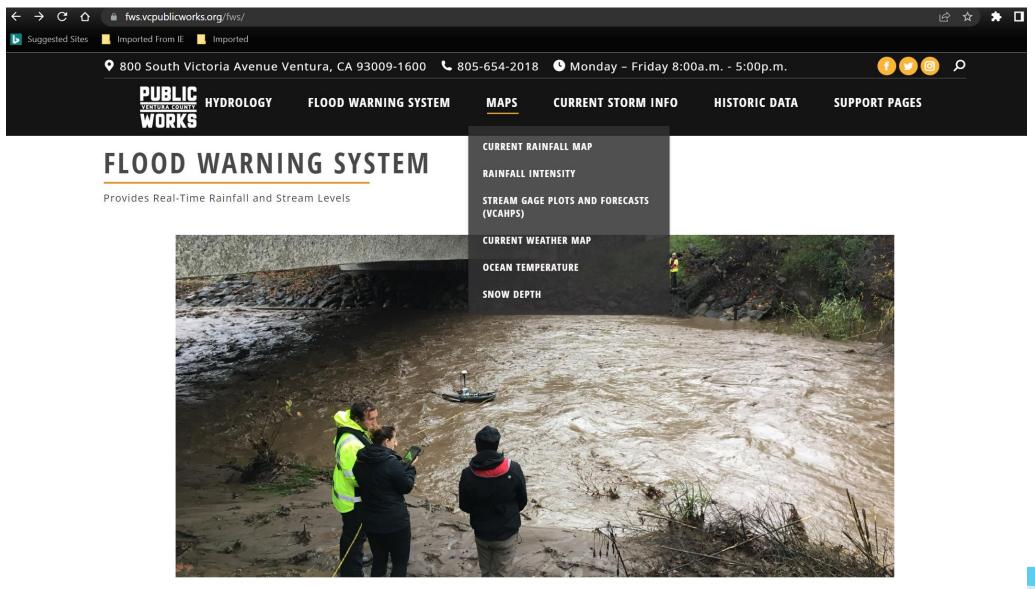


# **Operational Excellence Award**





#### **Modernized Flood Warning System Interface**

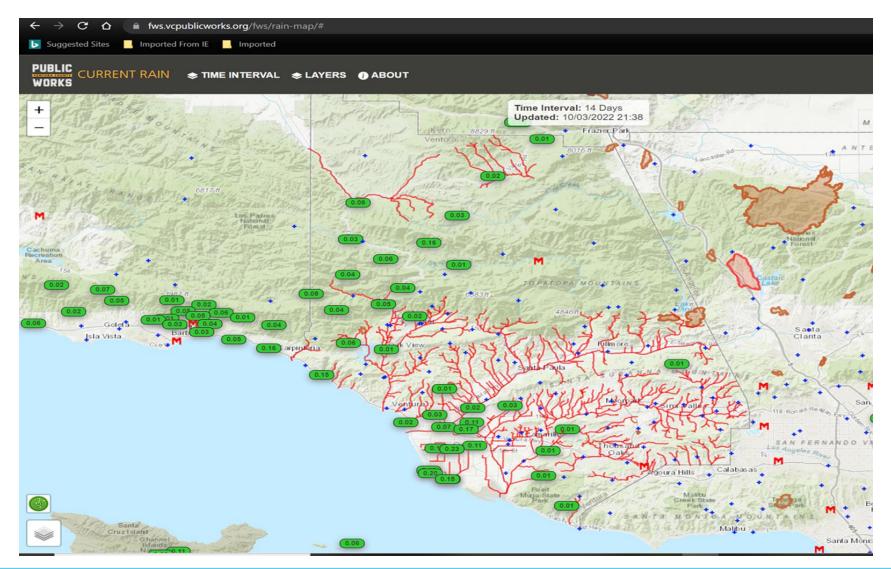




.......

FLOOD WARNING SYSTEM

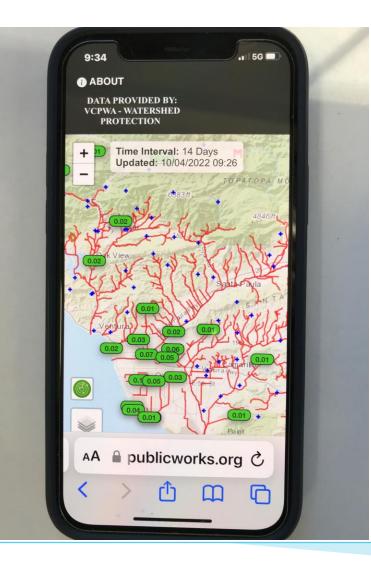
## **Modernized Flood Warning System - Rainfall**





#### **Modernized Flood Warning System - Rainfall**

**Mobile Display** 



#### **QR Code for Rainfall Map**





## **Modernized Flood Warning System – Stream Flow**

Site ID: 608

Current Flow: 3 cfs

Ventura River near Ventura USGS Radar

PUBL **Observed and Forecast Stream Levels** DATA PROVIDED BY VCPWA - WATERSHED Ventura River at Foster Park (608) PROTECTION WORKS OB SERVED--35.52-ft-I-46-cfs-at-44-26-03/27 FOREGAST 55 112724 54 112576 53 112427 Record Fimadania How: 152000 102385 52 51 88723 50 76038 Action Flow: 70000 49 64330 48 53600 47 43848 Stage (ft) 46 35073 45 26362 Ś 44 18305 0 43 S 11220 42 7355 41 4933 40 3471 39 1259 38 331 37 107 36 66 35 23 34 0 Thu Fri Sat Sun Mon Tue Wed Thu Fri Sat Sun Mon 03/23 03/24 03/25 03/22 03/26 03/27 03/28 03/29 03/30 03/31 04/01 04/02 (VCWPD Radar) Peak: 36.79 ft / 99 cfs @ 12:56 03/25 (VCWPD HSPF) Peak: 37.51 ft / 151 cfs @ 10:15 03/26 Observed Rainfall (H268) /CWPD HEC-1) Peak: 34.50 ft / 0 cfs @ 03:00 04/01 NWS RFC Sacramento) Peak: 36.10 ft / 102 cfs @ 05:00 03/28 (Nat Water Model Medium) Peak: 38.11 ft / 393 cfs @ 02:00 03/28 Forecasted Rainfall (LASTCHANCE 268)



WORKS

+

2022 Flood Preparedness Week: October 22-29

eaction

0

entui

Q



## **Questions & Answers**

