Storm Preparations and El Niño in Citrus Heights

Citrus Heights City Council Update

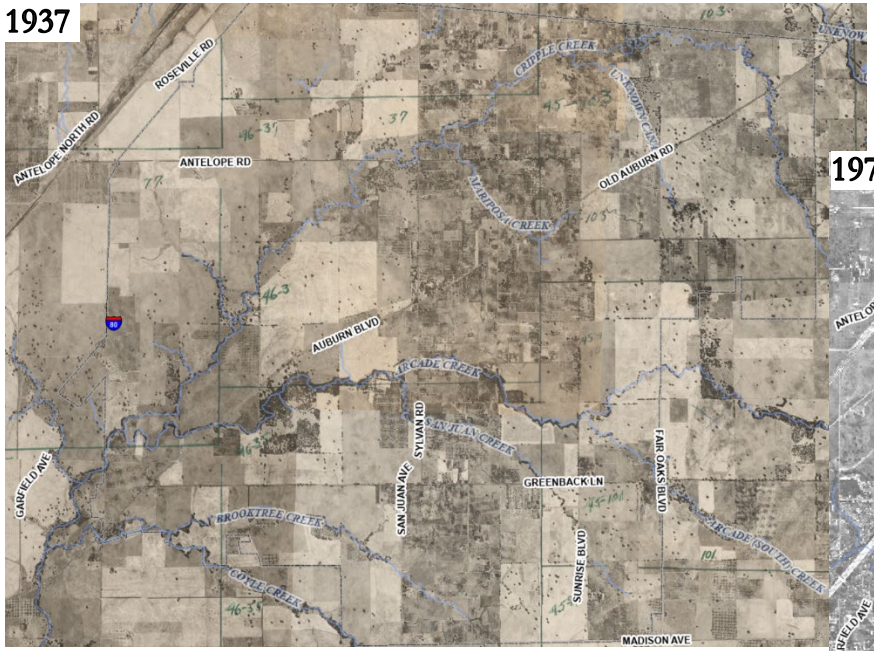
October 14, 2026

Agenda

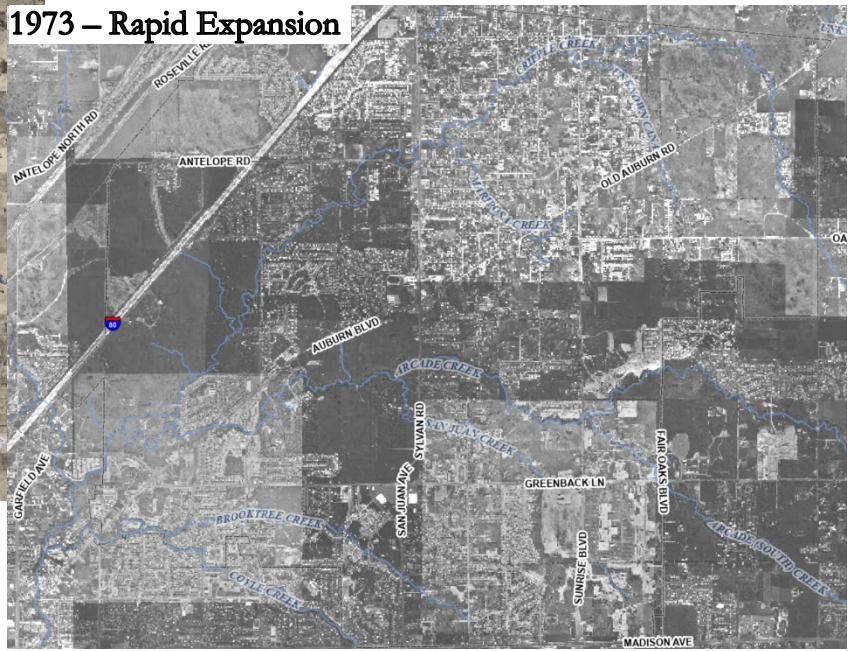
- Brief History of Development in Citrus Heights
- Stormwater Management and 2026 Preparations
- City's Past Flooding Events
- El Niño: Facts, History, Forecasts, and Unknowns
- Be Prepared - What You Can Do
- Resources

Development in Citrus Heights

1937

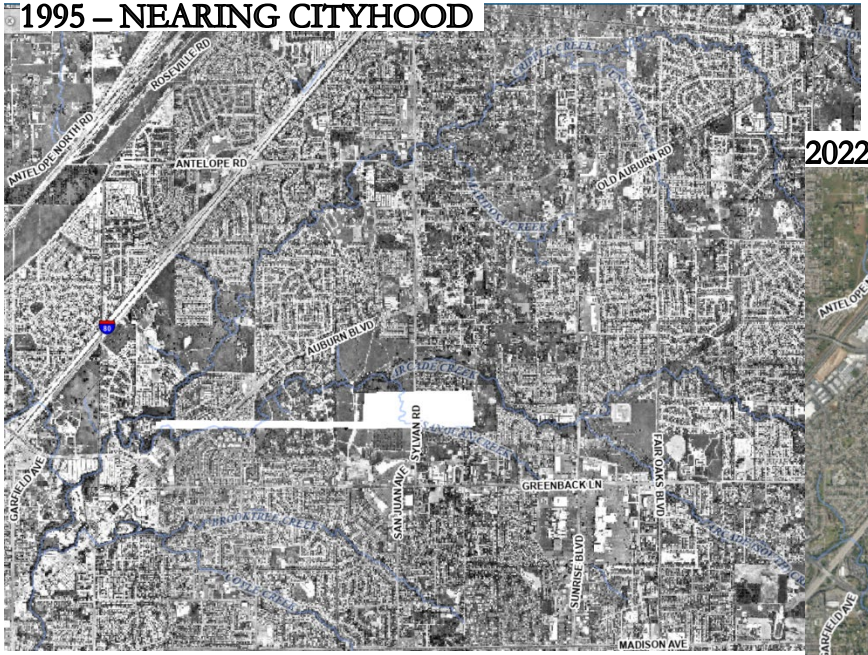


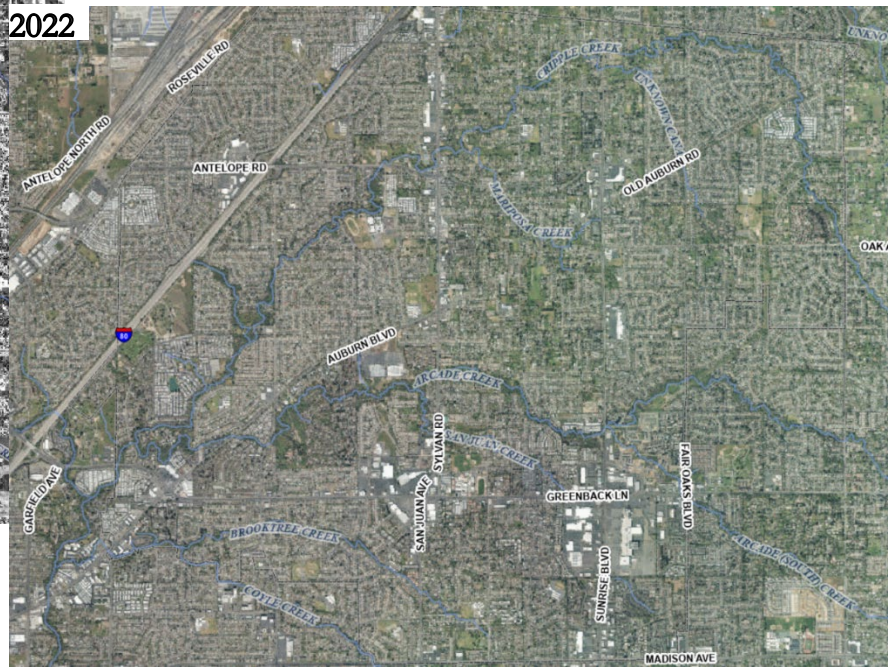
1973 – Rapid Expansion



Source: Sacramento County GIS

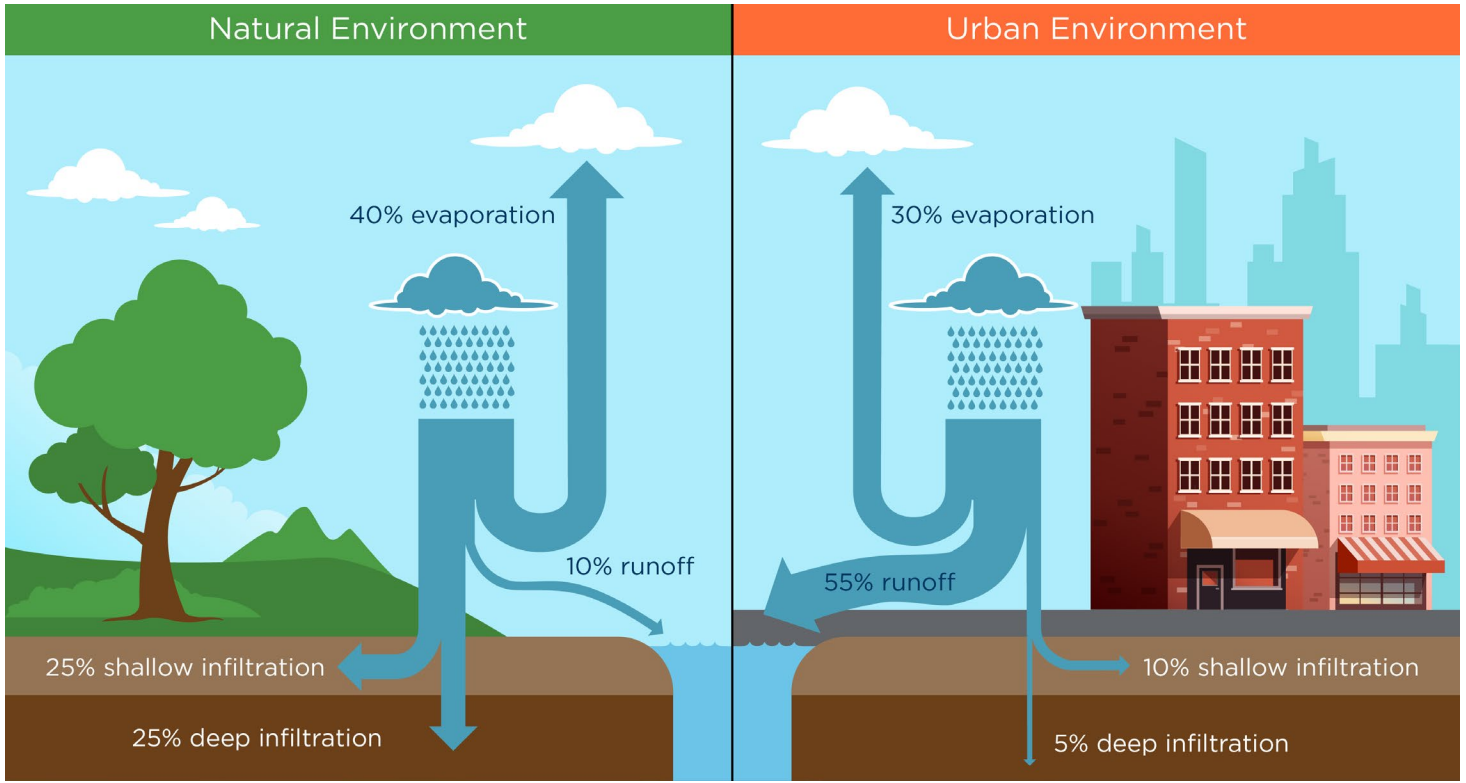
Development in Citrus Heights



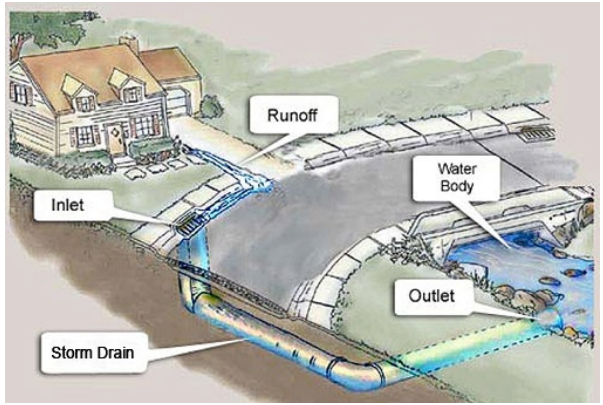


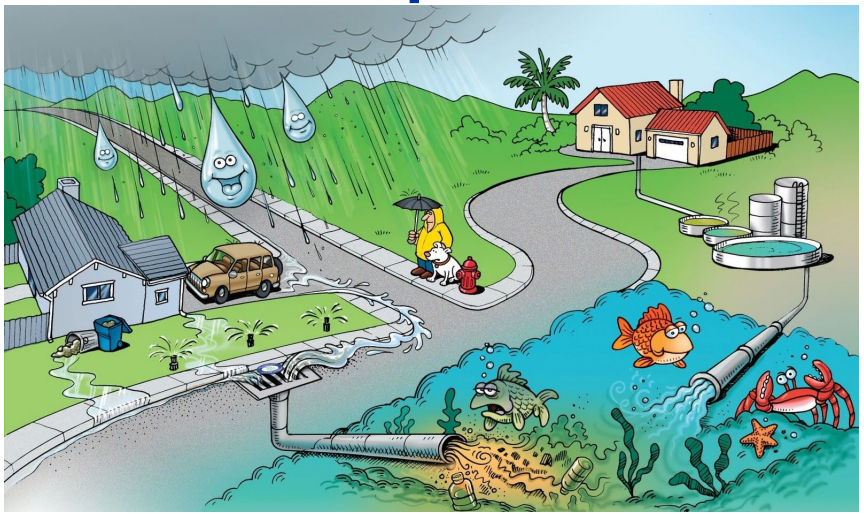
Source: Sacramento County GIS

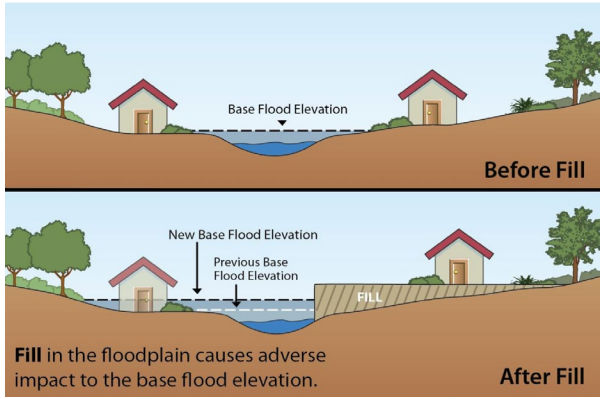
Development Impacts



Development Impacts









History of Stormwater Regulations

- CH was mostly developed in 1960's & 1970's (14 Mile House 1849 & few from 1910's still standing).
- 1968 National Flood Insurance Act - "FEMA" is created
- 1972 Clean Water Act – Including First Development Regulations for Stormwater
- 1975 First Flood Maps Established (updated in 1998, 2012, 2024)
- 1990 NPDES Permit Issued to Sacramento County & Incorporated Cities
- 1997 Citrus Heights **Cityhood**
- 2004 City assumes oversight of Stormwater Reviews for Developments
- 2006 1st Countywide Stormwater Quality Regulations
- 2010 City begins complete **Drainage & Stormwater Management**

General Services Department

Manages City Drainage, Waterway Assets, and New Development Reviews

(Above Ground) 26 Miles Of Creeks, 5 Miles of Concrete Channels, ~55 Miles of Ditches, and 68 Bridges

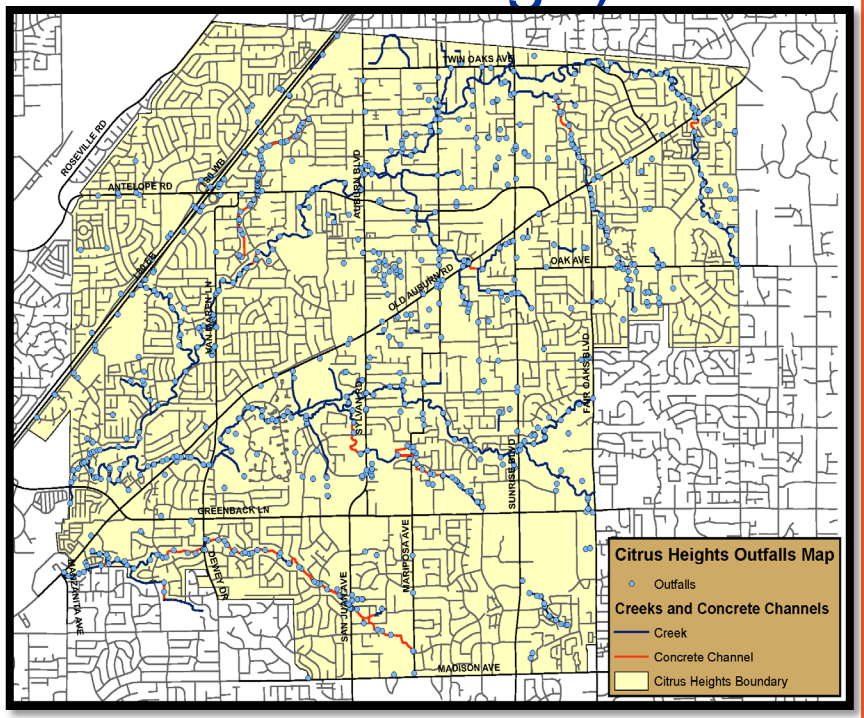
(Underground) >20 Miles Of Storm Drain Pipes, >5,700 Inlets, and >3,000 Manholes

Creeks and Channels
(86+ Miles to Protect & Manage)

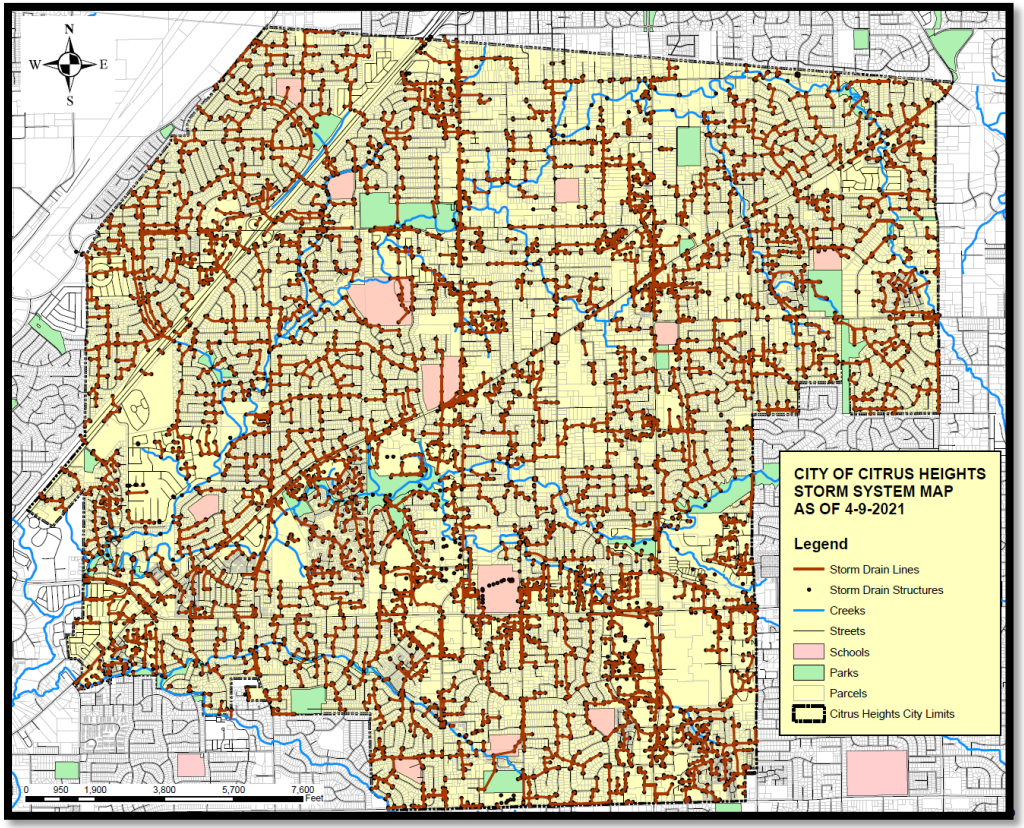
Storm Drain System Management is primarily funded through City's Stormwater Fund
(Parcel Taxes & Development Fees)

Goal: Effectively manage stormwater runoff as a resource while improving water quality.

- Creeks
  - Debris Removal (Contractors >50 cy/yr removed)
  - Vegetation Management (Goats & Contractors)
  - Bridge Maintenance (as prescribed by State inspections)
- Storm Drains
  - >750 Outfalls into Creeks
  - Pipe/inlet cleaning (150,000-200,000 ft/yr)
  - Street Sweeping (12,000 lane-mi/yr; 2,500-3,000 cy/yr)
  - Respond to Public Service Requests



Storm Drain Pipes& Outfalls



City Storm Preparedness



Certificate of Recognition
May 24, 2023

StormReady®

For improving the timeliness and effectiveness of hazardous weather warnings through a diligent and proactive approach of increased communication and preparedness the National Weather Service hereby recognizes

City of Citrus Heights

as StormReady through May 24, 2027.

Michelle Mead
Michelle Mead
Meteorologist-In-Charge
National Weather Service
Sacramento, California

Courtney Carpenter
Courtney Carpenter
Warning Coordination Meteorologist
National Weather Service
Sacramento, California



FEMA

City of Citrus Heights

successfully participates in the

National Flood Insurance Program
Community Rating System

The community has undertaken a series of meaningful activities to protect its citizens from losses caused by flooding and has significantly exceeded the requirements for NFIP participation and effective floodplain management.

7 CLASS

April 1, 2026

Signature

Assistant Administrator, Federal Insurance

Title



CERTIFICATE OF RECOGNITION

City of Citrus Heights
Daniel Kehrer – Senior Civil Engineer

in partnership with NWS Sacramento, is officially a WRN Ambassador helping to build a nation that is ready, responsive, and resilient to the impacts of extreme weather and water events.

April 18, 2023

AMBASSADOR WRN

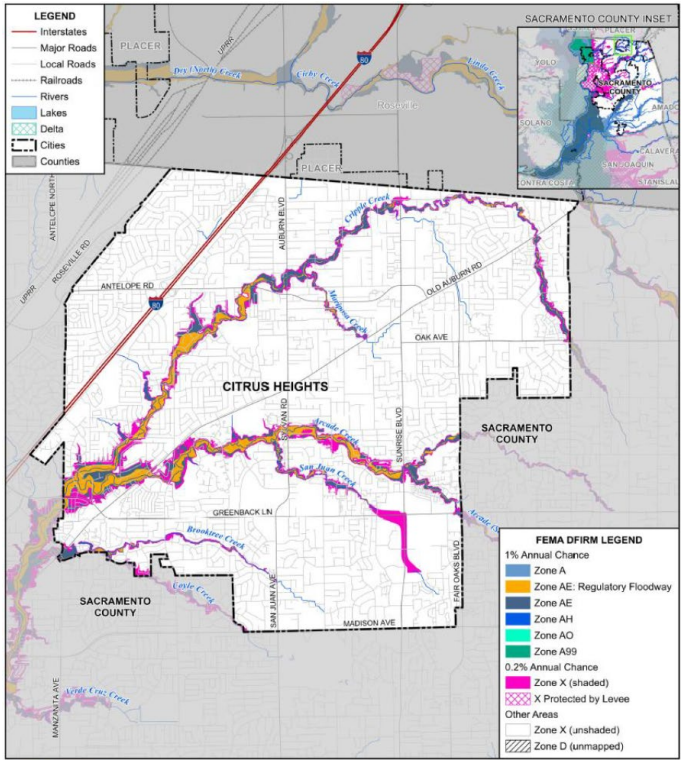
Past Flooding in the City

Historically, the Sacramento region has experienced flooding due to heavy rainfall and from flows within creeks. Major flooding has occurred within Citrus Heights in 1964, 1969, 1972, 1980, 1983, 1986, 1992, 1995, **1997***, 1998, 2005, and 2012.

*Citrus Heights was incorporated January 1997.

Other communities within Sacramento County have traditionally seen significantly higher impacts. This is due to our upstream geography with no major rivers or levees.

The City has 564 acres of 100-year FEMA floodplain (1% chance storm). This is 7% of the City's land-area, including >950 habitable structures.



2025/2026 Stormwater Impacts

Christmas Week Storm (12/23/25 – 12/26/25)

- Nearly 3” of rainfall total
- Creeks were high before the storm
- 25-year storm (4% chance) during peak hour(s) of rain

New Years Storm (1/1/26 – 1/6/26)

- 2” of rainfall total
- Creeks still very high
- 10-year storm (10% chance) during peak
- Local and Regional Alerts issued for low-lying areas

February “Cold” Storm (2/17/26 – 2/21/26)

- >2” of rainfall (much worse in surrounding areas)
- Cold Days between 30 and 40 degrees
- Creeks were at normal levels
- Minimal impacts within City Limits

April Storm (4/21/26 – 4/22/26)

- ~1.5” of rainfall
- Creeks were full from persistent rain (near wettest April on record)
- Spring blooms caused localized flooding due to clogged inlet

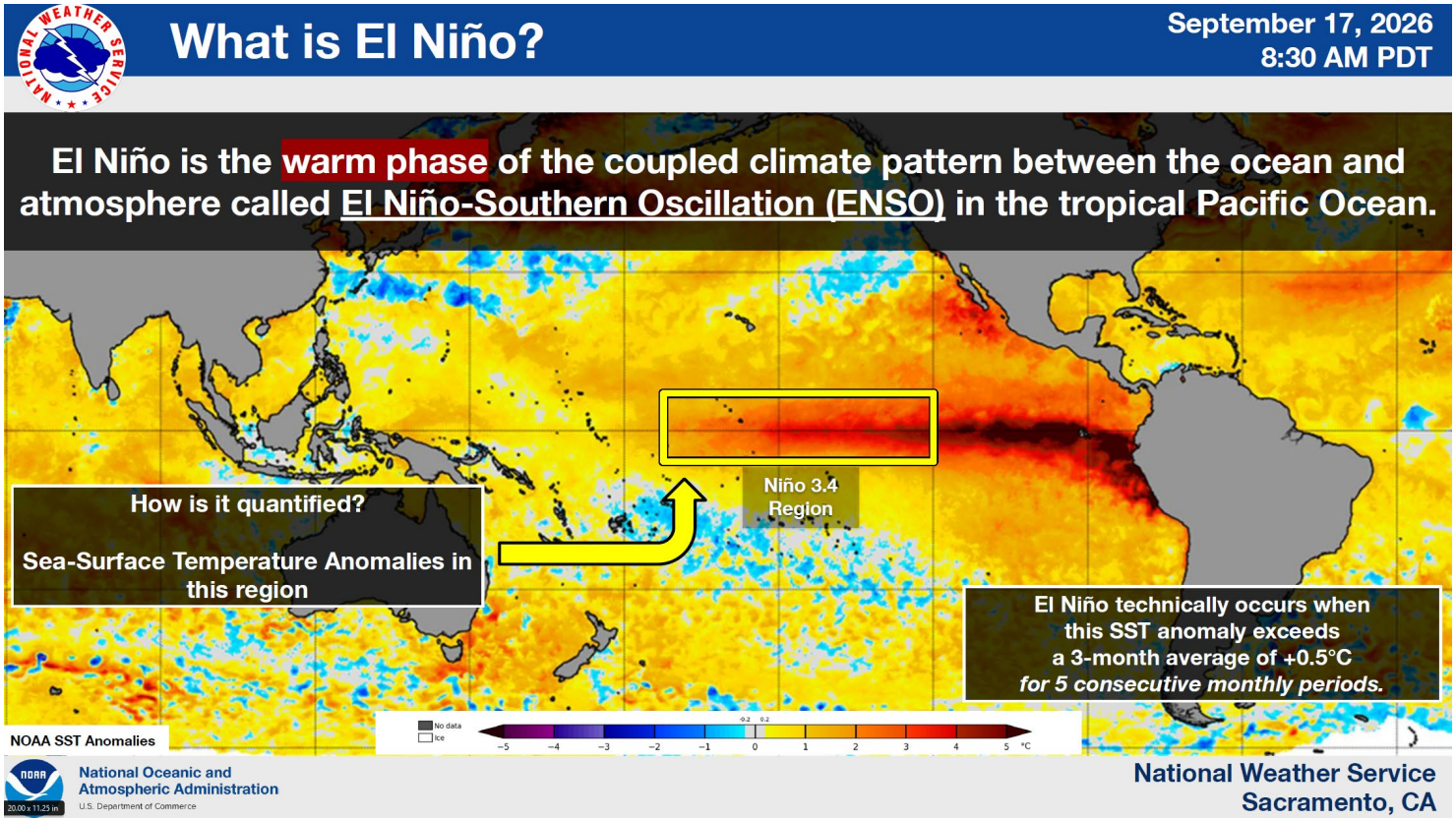
Greenback Lane / Fair Oaks Blvd 4/21/26



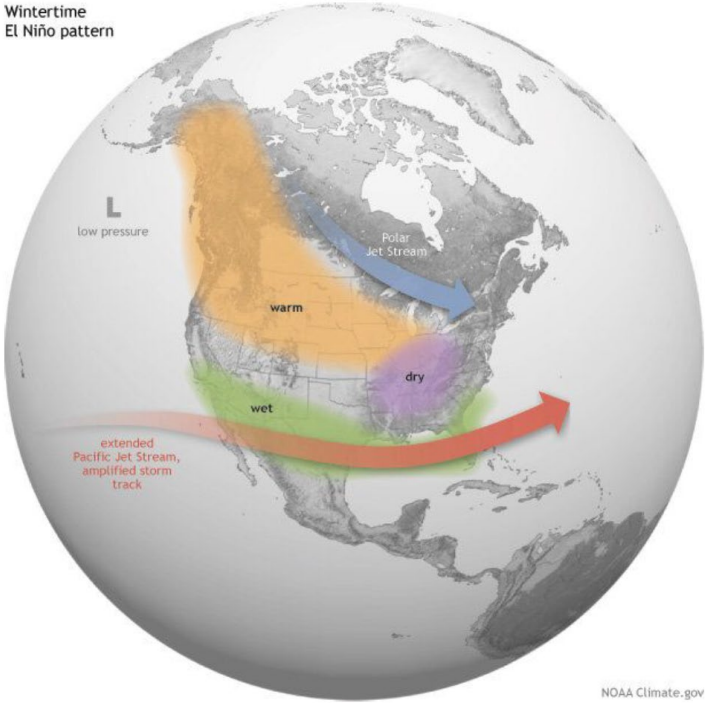
Blayden Court 4/21/26



El Niño

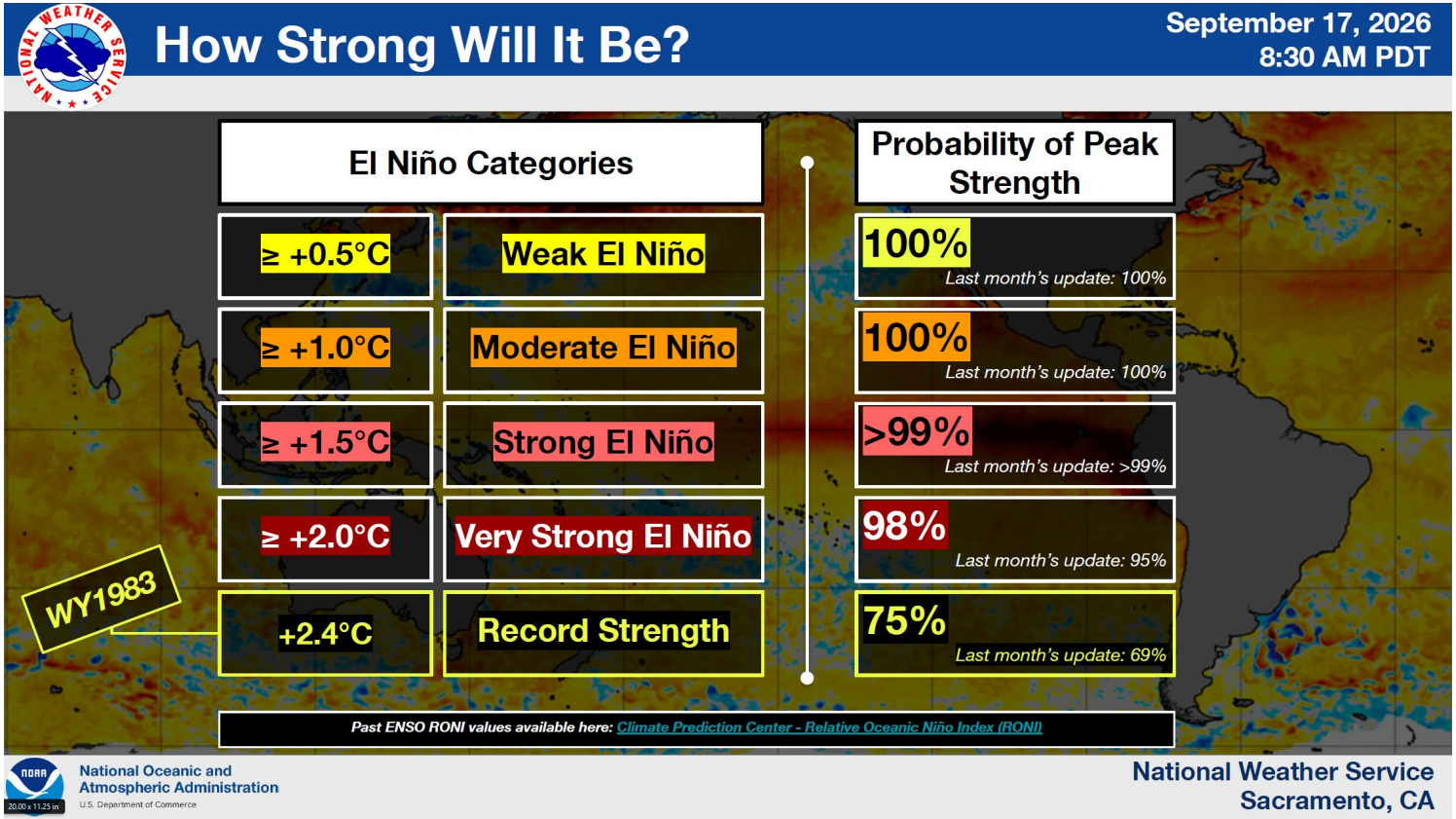

What is El Niño?
September 17, 2026
8:30 AM PDT
El Niño is the warm phase of the coupled climate pattern between the ocean and atmosphere called El Niño-Southern Oscillation (ENSO) in the tropical Pacific Ocean.
How is it quantified?
Sea-Surface Temperature Anomalies in this region
Niño 3.4 Region
El Niño technically occurs when this SST anomaly exceeds a 3-month average of +0.5°C for 5 consecutive monthly periods.
NOAA SST Anomalies
No data
Ice
−5 −4 −3 −2 −1 0 1 2 3 4 5 °C
National Oceanic and Atmospheric Administration
U.S. Department of Commerce
National Weather Service
Sacramento, CA

El Niño



National Weather Service
Sacramento, CA

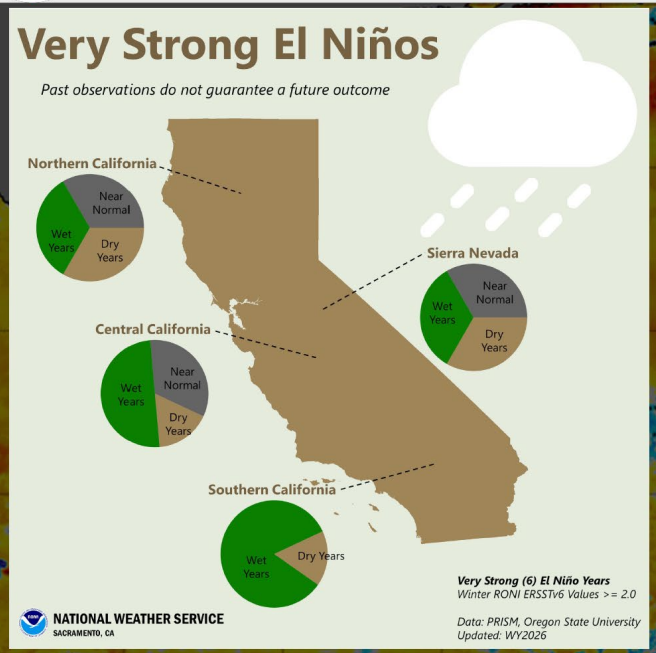
El Niño


How Strong Will It Be?
September 17, 2026
8:30 AM PDT
El Niño Categories
Probability of Peak Strength
≥ +0.5°C
Weak El Niño
100%
Last month's update: 100%
≥ +1.0°C
Moderate El Niño
100%
Last month's update: 100%
≥ +1.5°C
Strong El Niño
>99%
Last month's update: >99%
≥ +2.0°C
Very Strong El Niño
98%
Last month's update: 95%
WY1983
+2.4°C
Record Strength
75%
Last month's update: 69%
Past ENSO RONI values available here: Climate Prediction Center - Relative Oceanic Niño Index (RONI)
National Oceanic and Atmospheric Administration
U.S. Department of Commerce
National Weather Service
Sacramento, CA

El Niño

Historical Very Strong El Niños

September 17, 2026
8:30 AM PDT



- There have been **6 Very Strong El Niños since 1950:** 1965-66, 1972-73, 1982-83, 1991-92, 1997-98, 2015-16.
- Of those 6, the breakdown has been…
  - Northern CA:
    - 2 Wet
    - 2 Normal
    - 2 Dry
  - Central CA:
    - 3 Wet
    - 2 Normal
    - 1 Dry
  - Sierra Nevada:
    - 2 Wet
    - 2 Normal
    - 2 Dry
  - Southern CA:
    - 5 Wet
    - 0 Normal
    - 1 Dry

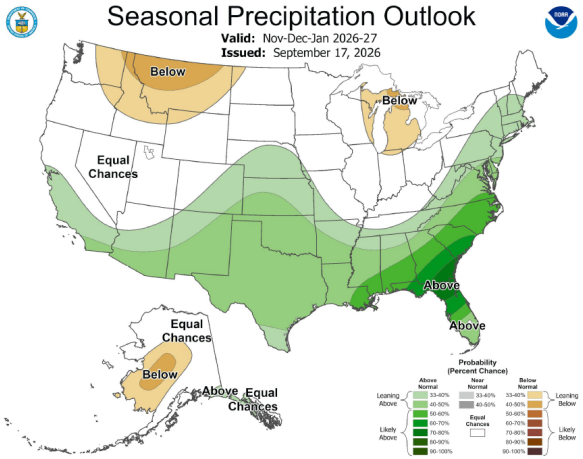
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

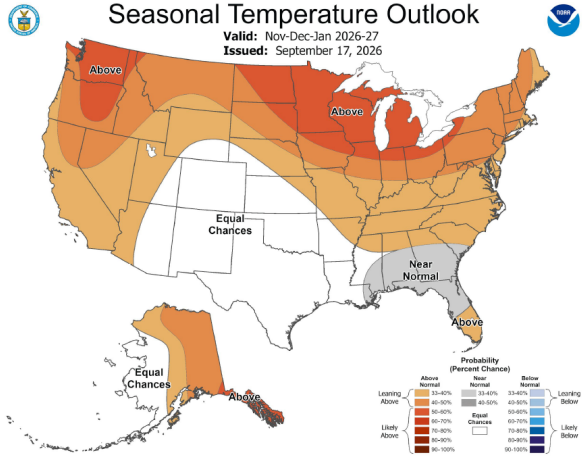
National Weather Service
Sacramento, CA

El Niño

CPC 3 Month Outlook

October 6, 2026
11:50 AM PDT





Precipitation:
Odds leaning towards **EQUAL CHANCES** to slightly **ABOVE NORMAL**

Temperature:
Odds leaning towards **ABOVE NORMAL** temperatures across interior northern CA

The latest monthly and seasonal outlooks can be found on the CPC homepage

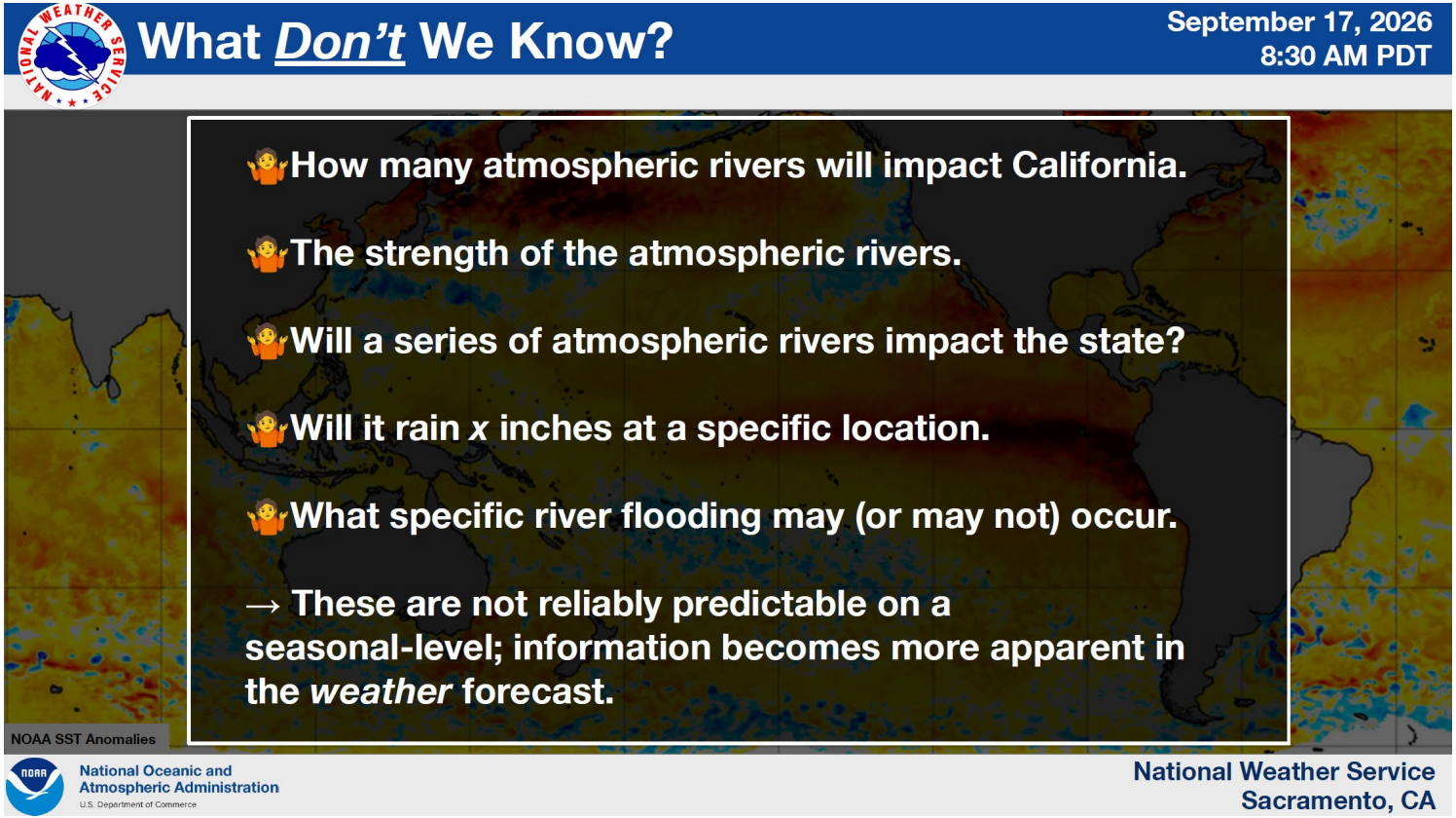
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

National Weather Service
Sacramento, CA

El Niño


What Do We Know?
September 17, 2026
8:30 AM PDT
✅El Niño is already here.
✅El Niño strength will be very strong.
✅El Niño historically results in an active Eastern Pacific tropical activity.
e.g., CA Impact: 2023 Hurricane Hilary
✅Southern California:
Very Strong El Niños tend to favor wetter than normal conditions.
✅Northern California:
Precipitation predictability is less certain.
✅Individual storms define a season for a community.
✅We are closing out the Water Year with nearly all the major reservoirs in good shape.
NOAA SST Anomalies
National Oceanic and Atmospheric Administration
U.S. Department of Commerce
National Weather Service
Sacramento, CA

El Niño


What Don't We Know?
September 17, 2026
8:30 AM PDT
🤷How many atmospheric rivers will impact California.
🤷The strength of the atmospheric rivers.
🤷Will a series of atmospheric rivers impact the state?
🤷Will it rain x inches at a specific location.
🤷What specific river flooding may (or may not) occur.
→ These are not reliably predictable on a seasonal-level; information becomes more apparent in the weather forecast.
NOAA SST Anomalies
National Oceanic and Atmospheric Administration
U.S. Department of Commerce
National Weather Service
Sacramento, CA

Be Prepared – What you can do



Resources

City Website & Resources

https://www.citrusheights.net/419/Be-Storm-Ready---Residential
https://www.citrusheights.net/DocumentCenter/View/24352/Online-Flood-Information-Library?bidId=
E-Notify Emergency Alerts https://www.citrusheights.net/64/Emergency-Alert

County Website & Resources

Alerts & Preparation Planning https://sacramentoready.saccounty.gov/
Stream Levels & Rainfall Data https://www.sacflood.org/

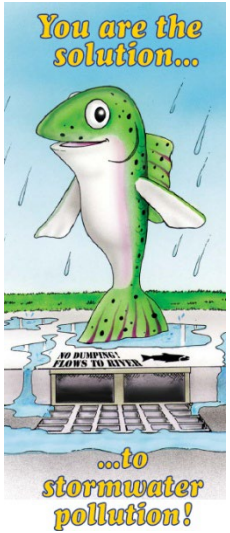
National Weather Service (NOAA) Forecasts

https://www.weather.gov/

Need Service? Contact General Services

916-727-4770
stormwater@citrusheights.net
See-Click-Fix App





Resources

SANDBAGS AND SAND ARE HERE

Sand sites:

- City Hall - 6360 Fountain Square Drive
- C-Bar-C Park - 8273 Oak Avenue

Retrieving bags: City Hall Reception M-F 8am-4pm

*Small amount available at City Hall location on weekends.

Limit to 10 bags/residence (bring ID or utility bill for verification)

Expanded Weekend Distribution!

- 10/17/26 City Hall from 9am to 12pm
- 10/24/26 C-Bar-C Park from 9am to 12pm
- 10/31/26 C-Bar-C Park from 9am to 12pm
- 11/7/26 C-Bar-C Park from 9am to 12pm

