

**Carson City
Agenda Report**

Date Submitted: September 22, 2015

Agenda Date Requested: October 1, 2015

Time Requested: 20 Minutes

To: Mayor and Supervisors

From: Nick Marano, City Manager

Subject Title: Presentation Only: Presentation and discussion by Carson Water Subconservancy District (CWSD) regarding update on activities in the Carson River Watershed. *(Ed James)*

Staff Summary: CWSD General Manager Ed James will discuss the drought, flood studies, watershed survey and other items and activities of the CWSD.

Type of Action Requested: (check one)

Resolution

Ordinance

Formal Action/Motion

Other (Specify) Presentation only

Does this action require a Business Impact Statement: () Yes (X) No

Recommended Board Action: Discussion only

Explanation for Recommended Board Action: See staff summary.

Applicable Statute, Code, Policy, Rule or Regulation: N/A

Fiscal Impact: None

Explanation of Impact: N/A

Funding Source: N/A

Alternatives: N/A

Supporting Material: Presentation

Prepared By: Janet Busse, Department Business Manager

Reviewed By: Lick Manam Date: 9/22/15
(City Manager)

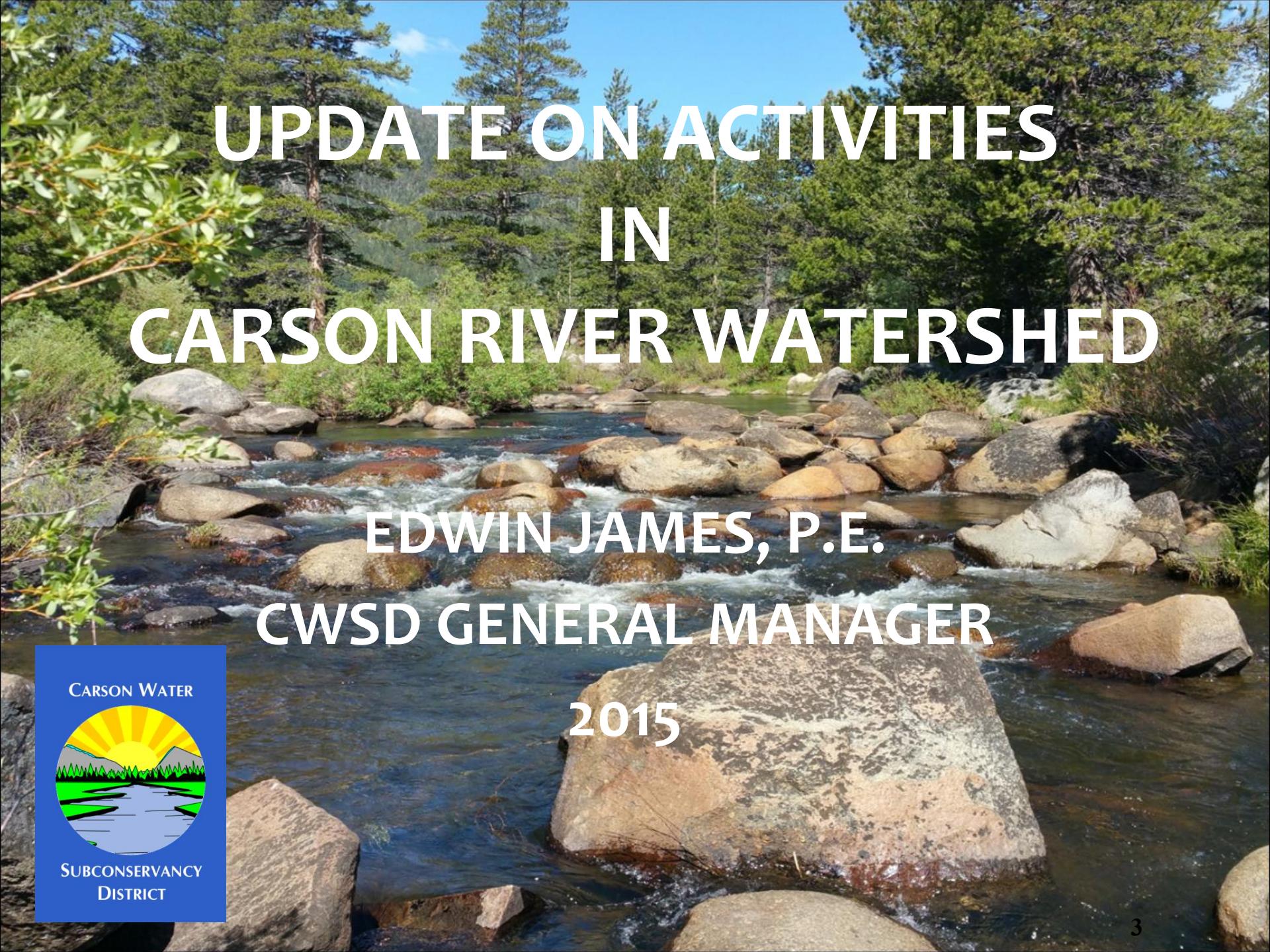
J. G. Date: 9/22/15
(District Attorney)

Nancy Paulson Date: 9/22/15
(Finance Director)

Board Action Taken:

Motion: _____ 1) _____ Aye/Nay _____
2) _____

(Vote Recorded By)

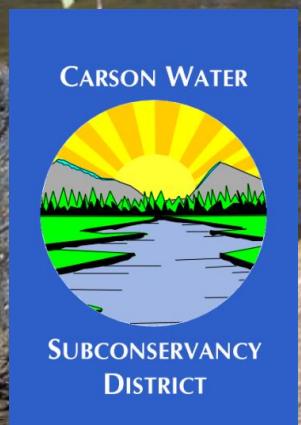


UPDATE ON ACTIVITIES IN CARSON RIVER WATERSHED

EDWIN JAMES, P.E.

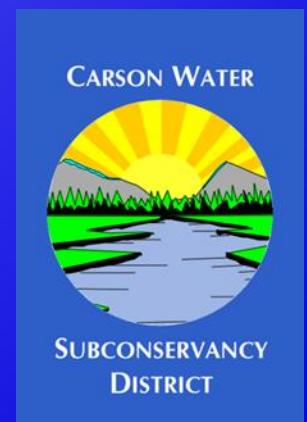
CWSD GENERAL MANAGER

2015



WHAT WE DO:

Promote cooperative action across agency and political boundaries in the Carson River Watershed, using integrated watershed management.



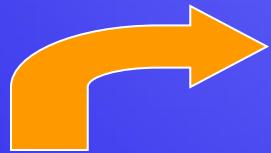


Carson River Coalition

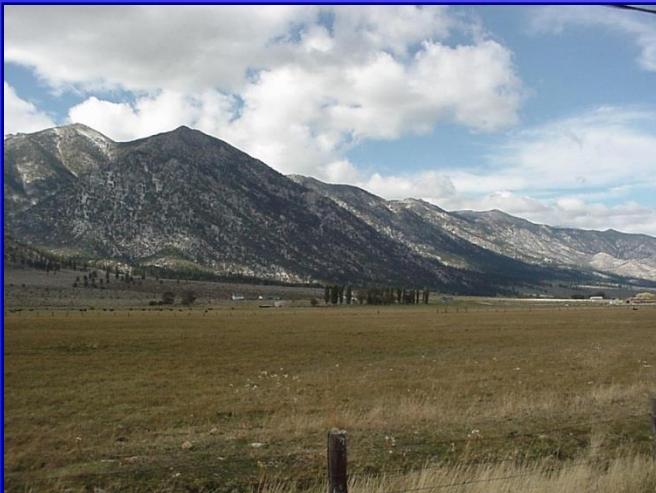
Working together for the
Carson River Watershed

Coordinate the Carson River Coalition (CRC), a large stakeholder group of federal, state, county, and tribal agencies; non-governmental entities, private citizens, and landowners.

BALANCING WATER SUPPLIES



Environmental



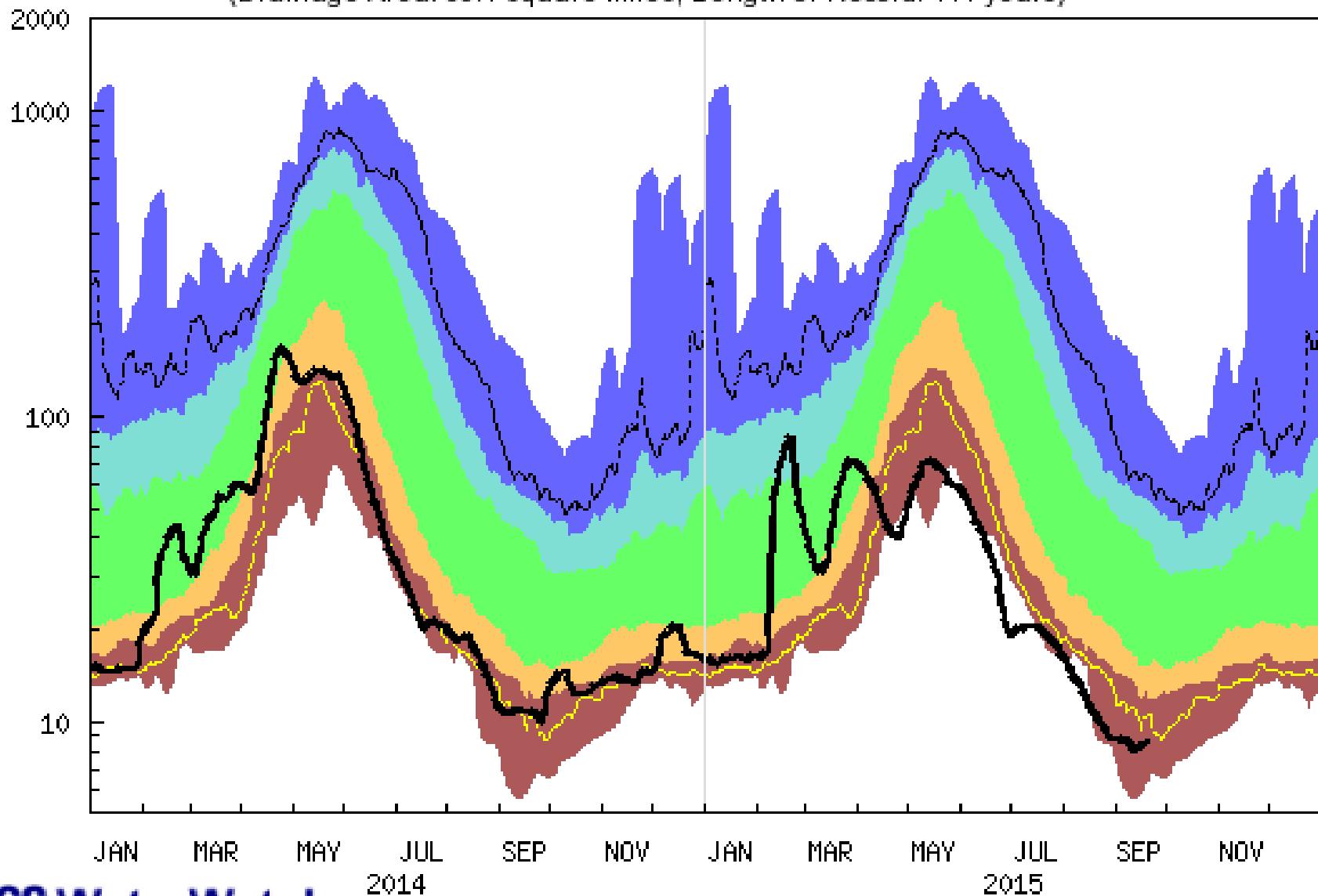
Agricultural

Domestic

DROUGHT

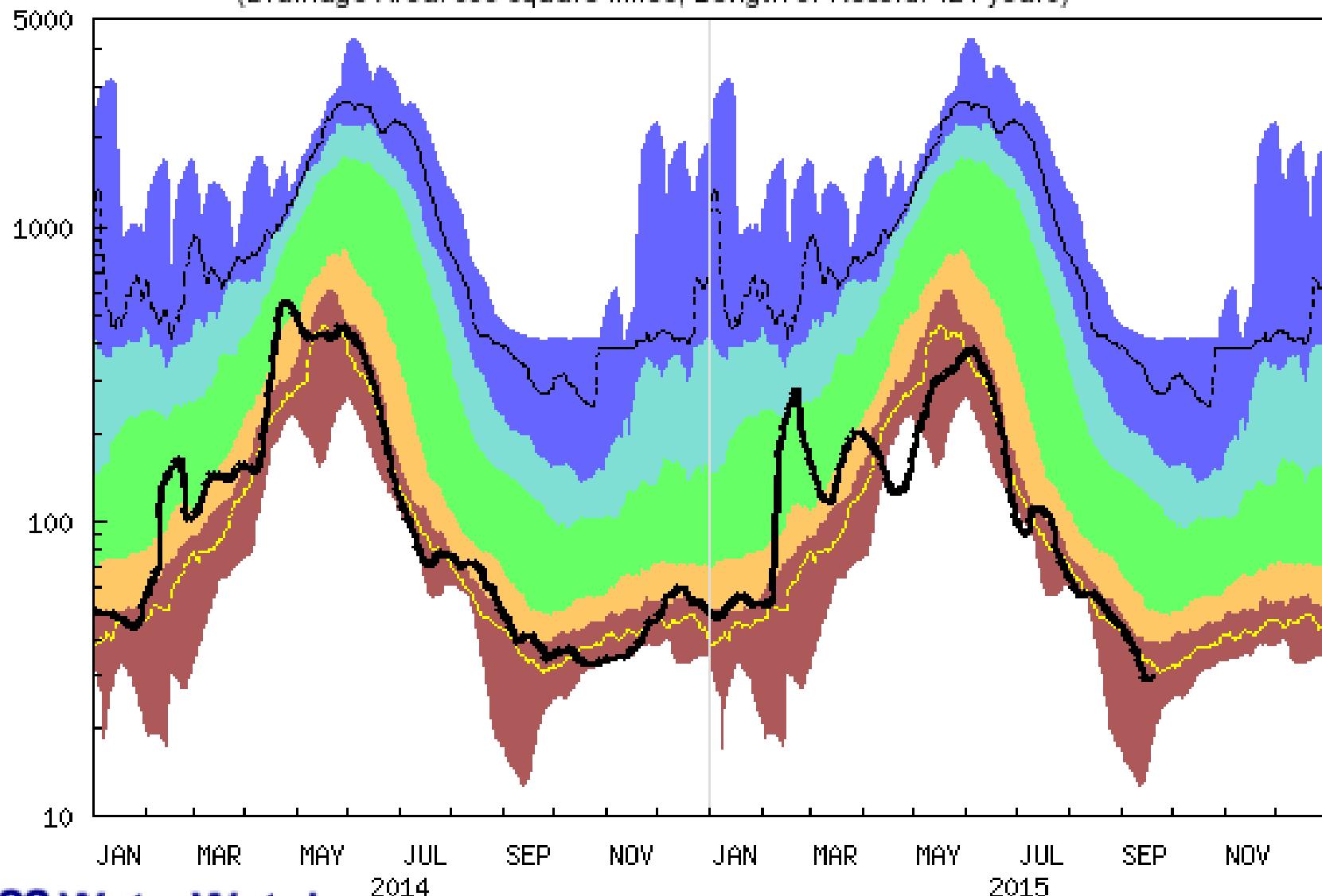
USGS 10310000 W FK CARSON RV AT WOODFORDS, CA
(Drainage Area: 65.4 square miles, Length of Record: 114 years)

14-day average discharge, in cubic feet per second



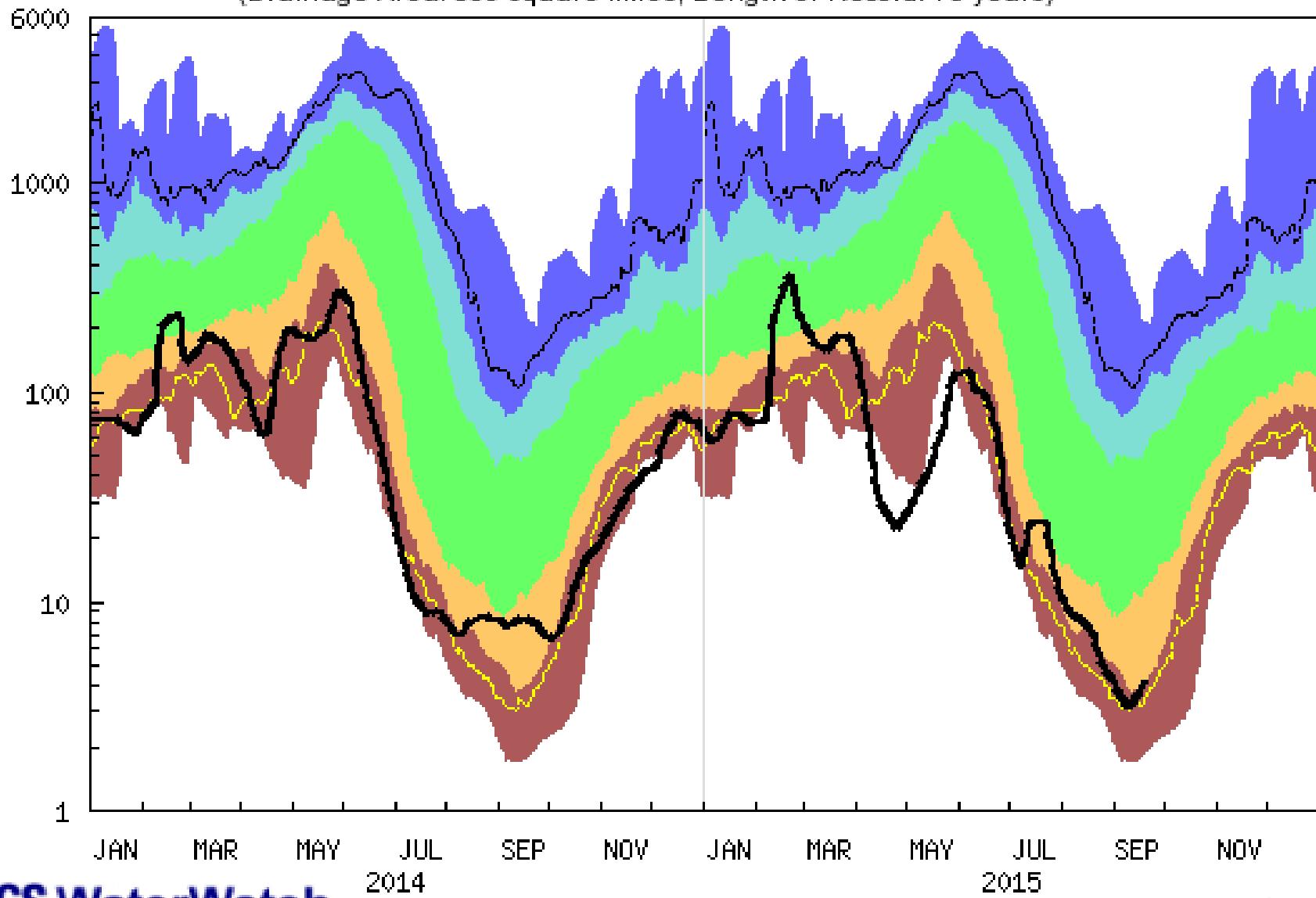
USGS 10309000 E FK CARSON RV NR GARDNERVILLE, NV
(Drainage Area: 356 square miles, Length of Record: 124 years)

14-day average discharge, in cubic feet per second



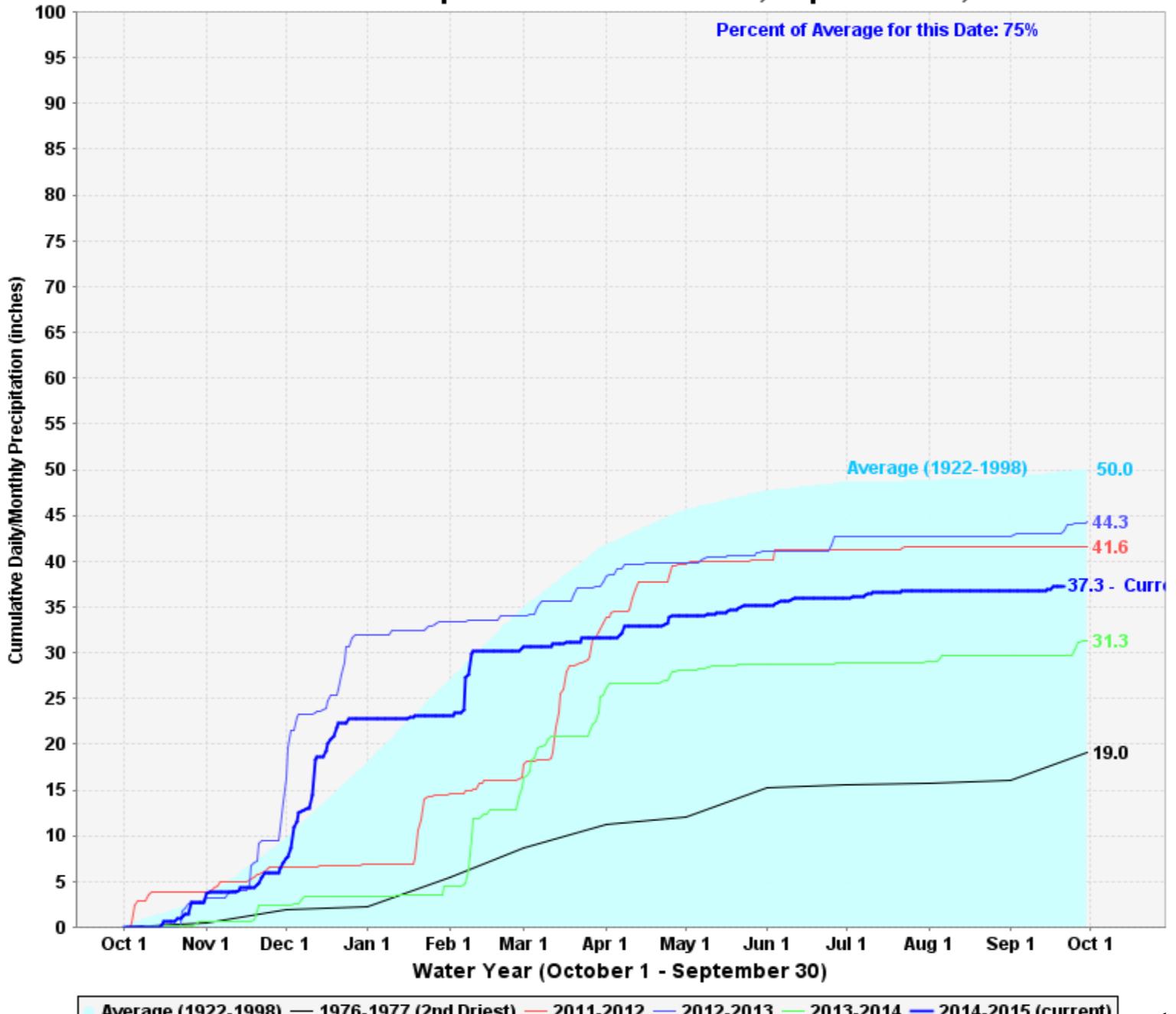
USGS 10311000 CARSON RV NR CARSON CITY, NV
(Drainage Area: 886 square miles, Length of Record: 75 years)

14-day average discharge, in cubic feet per second

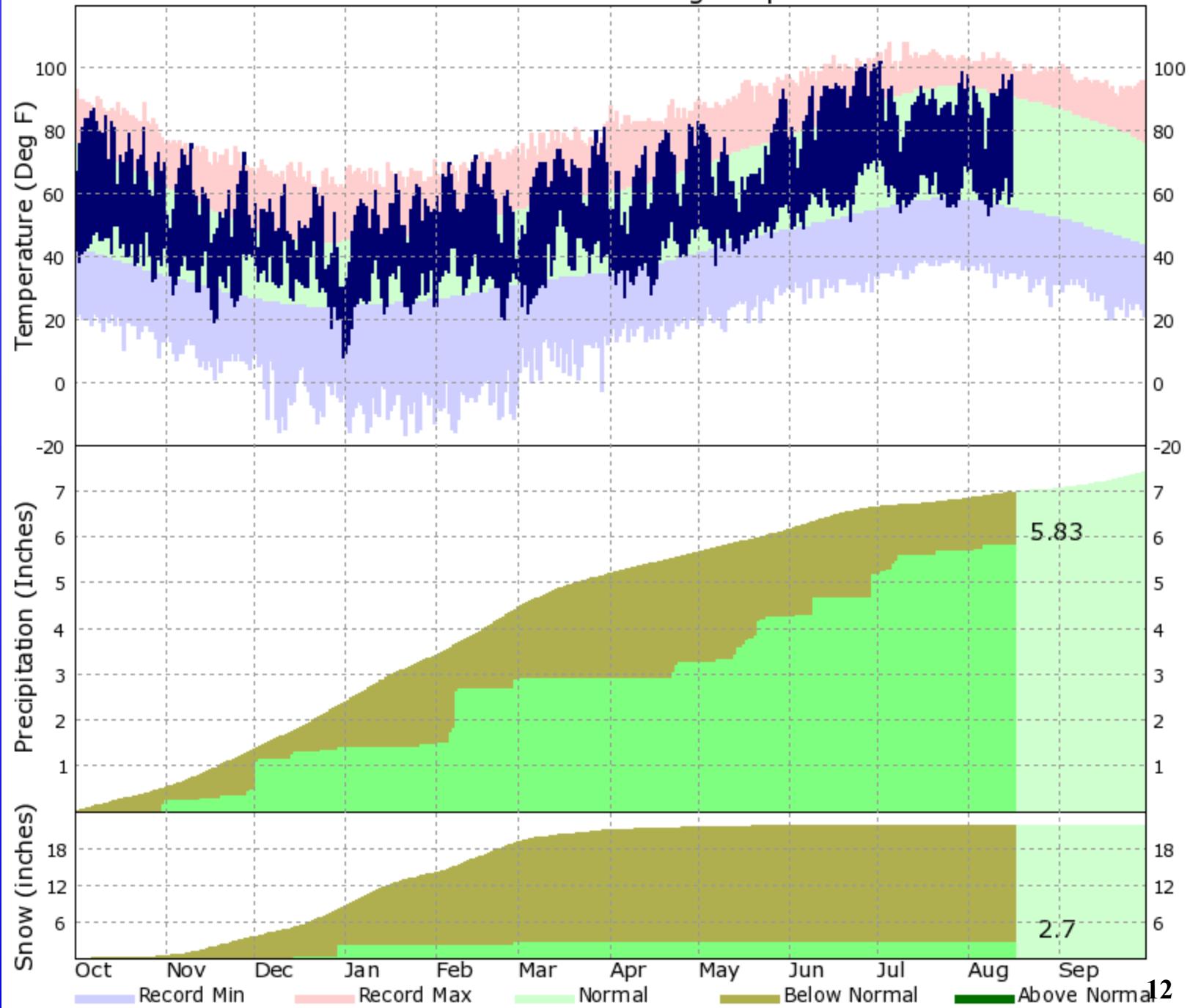


Northern Sierra Precipitation: 8-Station Index, September 21, 2015

Percent of Average for this Date: 75%



KRNO - Oct 2014 Through Sep 2015



MEETING WATER DEMANDS

- Carson Valley, Carson City, and Churchill County water supply in good shape.
- Lyon County met its water needs but new water sources are needed to meet new water demands.

Wet Water versus Paper Water

Churchill Valley Groundwater Basin		
Pumpage Inventory		
Category	Committed Ground Water Resource (AF)	Pumpage (AF)
Irrigation	3,938	581
Commercial/ Stock/ Industrial	446	54
Quasi- Municipal	6,461	530
Domestic Wells	N/A	1,405
Total	10,845	2,570

Perennial Yield = 1,600 AF

GROUNDWATER ASSESSMENT

- Overall the groundwater basins in the Watershed are not being over drafted.
- There are areas of concern:
 - Ruhensroth area
 - Fish Springs area
 - Johnson Lane area
 - Kings Canyon area
 - Mark Twain area
 - Stagecoach area
 - South Silver Springs area

REGIONAL FLOODPLAIN PLANNING



REGIONAL FLOODPLAIN MANAGEMENT PLAN

- Living River Concept
- 2004 Conference
- Developed through cooperative process

Carson River Coalition River Corridor Working Group

- Public Workshops
- Goal - Reduce Flooding Hazards by Protecting Floodplains
- Adopted by all 5 Counties in 2008!



ce is available in this community, contact your insurance
d Insurance Program at 1-800-638-8620.



MAP SCALE 1" = 500'

9 150 200 2011-12-12 10:10:10

PANEL 0451E

FIRM

FLOOD INSURANCE RATE MAP

LYON COUNTY.

**NEVADA
AND INCORPORATED AREAS**

PANEL 451 OF 1375

[SEE MAP INDEX FOR FIRM PANEL LAYOUT]

CONTAINS:
COMMUNITY NUMBER PANEL SUFFIX
LION COUNTY 829628 0454 E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

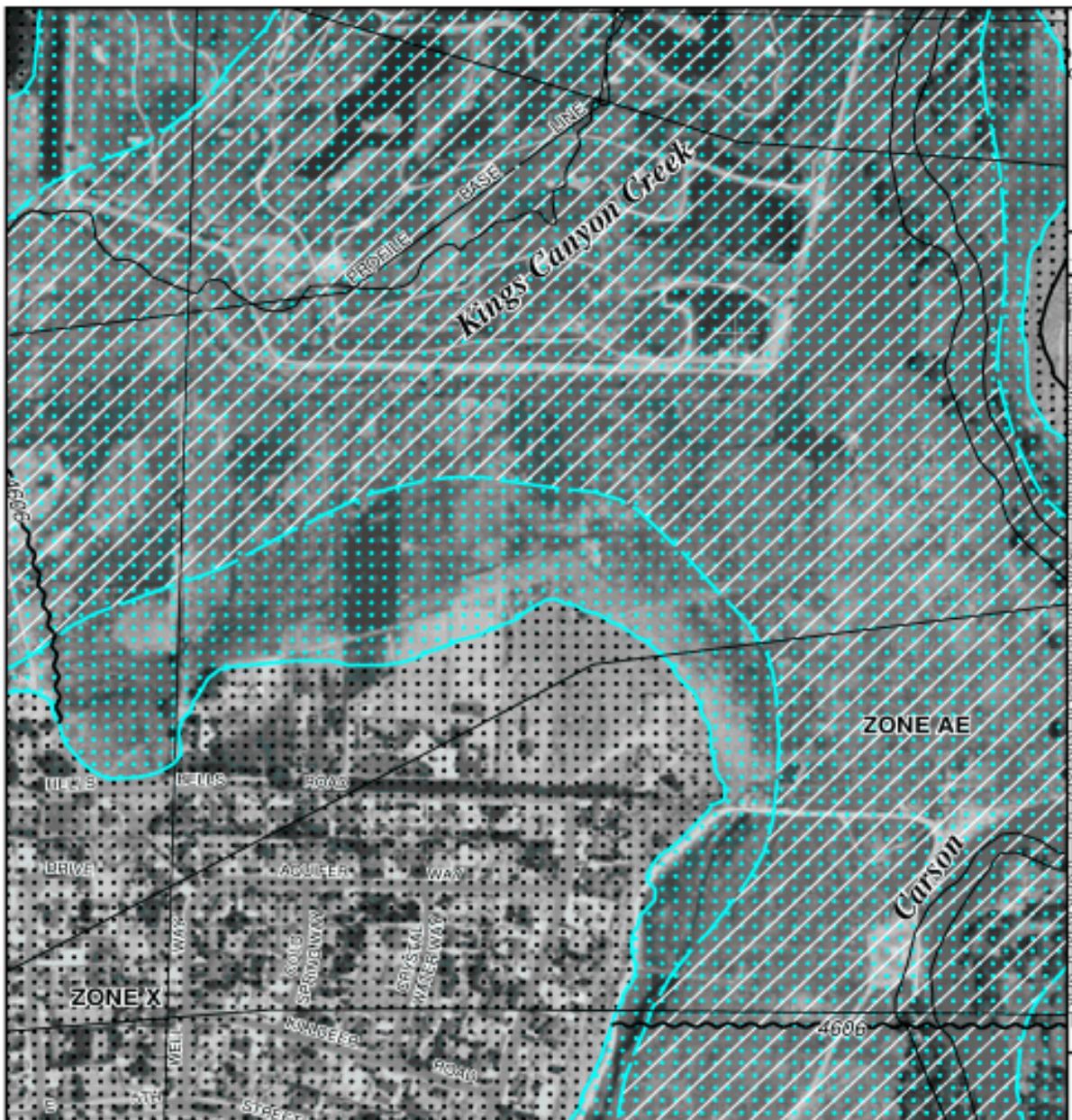


MAP NUMBER
12019CM451E

EFFECTIVE DATE
JANUARY 16, 2009

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using FAMIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at www.msic.fema.gov.



ce is available in this community, contact your insurance and Insurance Program at 1-800-638-6620.



MAP SCALE 1" = 500'

ANSWER

PANEL 0112E

FIRM FLOOD INSURANCE RATE MAP

**CARSON CITY,
NEVADA
INDEPENDENT CITY**

PANEL 112 OF 275

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:
COMMUNITY NUMBER PANEL SUFFIX

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

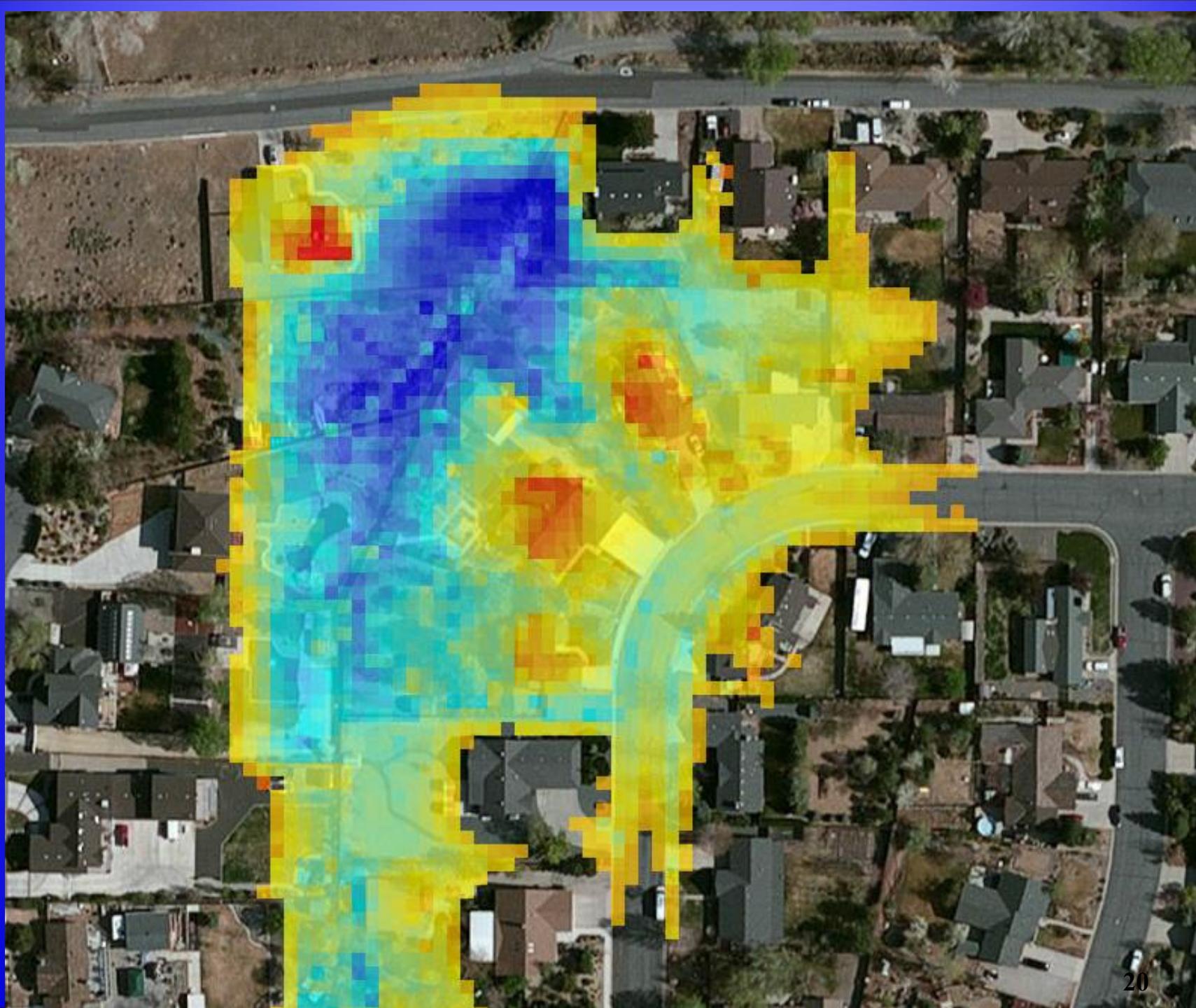


MAP NUMBER

MAP REVISED
JANUARY 16, 2009

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at www.msc.fema.gov.



WATER QUALITY



Low Impact Development In the Carson River Watershed

Promote Implement Maintain

April 2015



Prepared for
Carson Water Subconservancy District

Prepared by
Resource Concepts, Inc.



WATERSHED SURVEY

WATERSHED-LITERACY SURVEY OF CARSON RIVER WATERSHED RESIDENTS

Photo credit: © Tim Torell

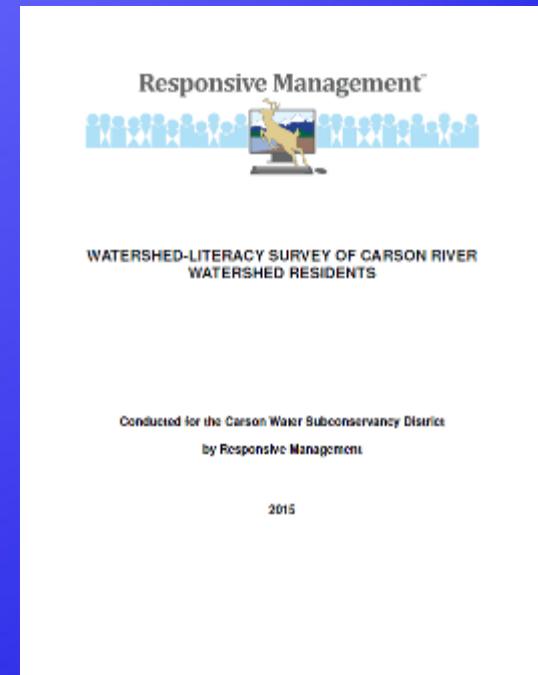


**MARK DAMIAN DUDA,
RESPONSIVE MANAGEMENT**

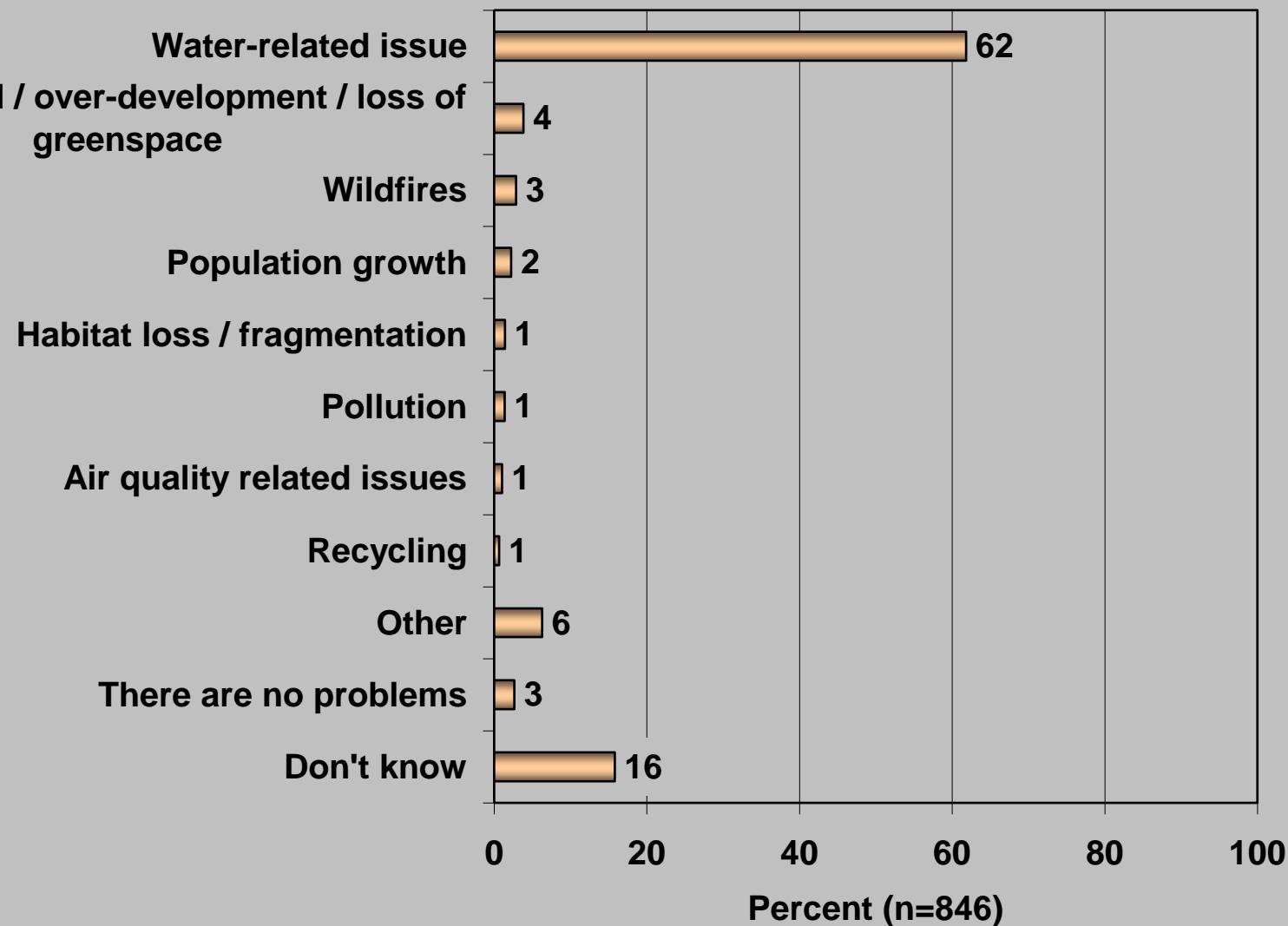
JULY 13, 2015

STUDY METHODOLOGY

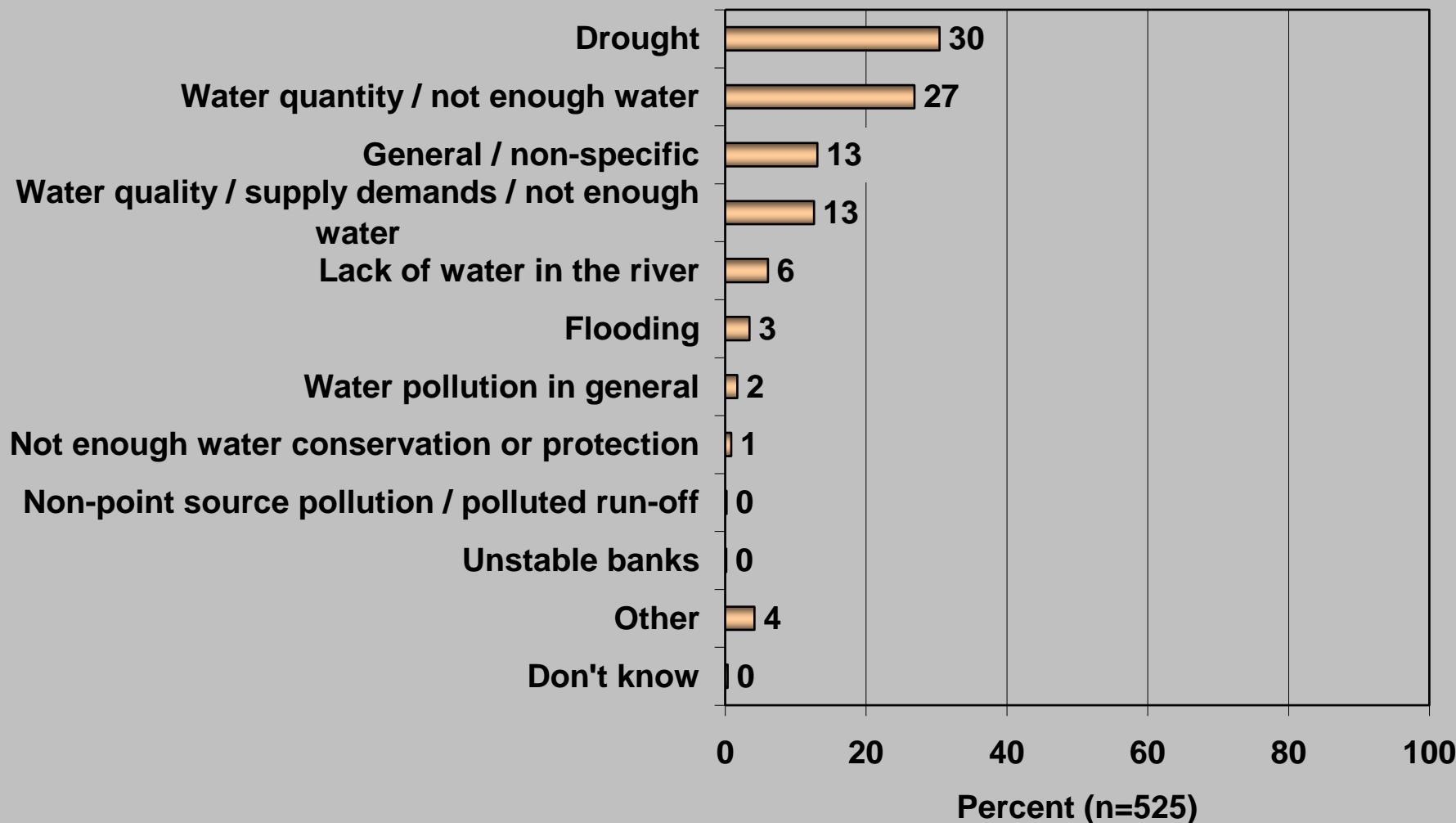
- Telephone survey conducted for the Carson Water Subconservancy District to determine Carson River Watershed residents' knowledge of and attitudes toward:
 - Watershed health
 - Knowledge of basic watershed concepts
 - Participation in activities or behaviors that may impact the watershed's environment
- Residents of the Carson River Watershed area in Nevada and California, ages 18 and older (n=846)
- Both landline and cellular telephones were called
- Conducted in June 2015
- Sampling error = +/- 3.36 percentage points



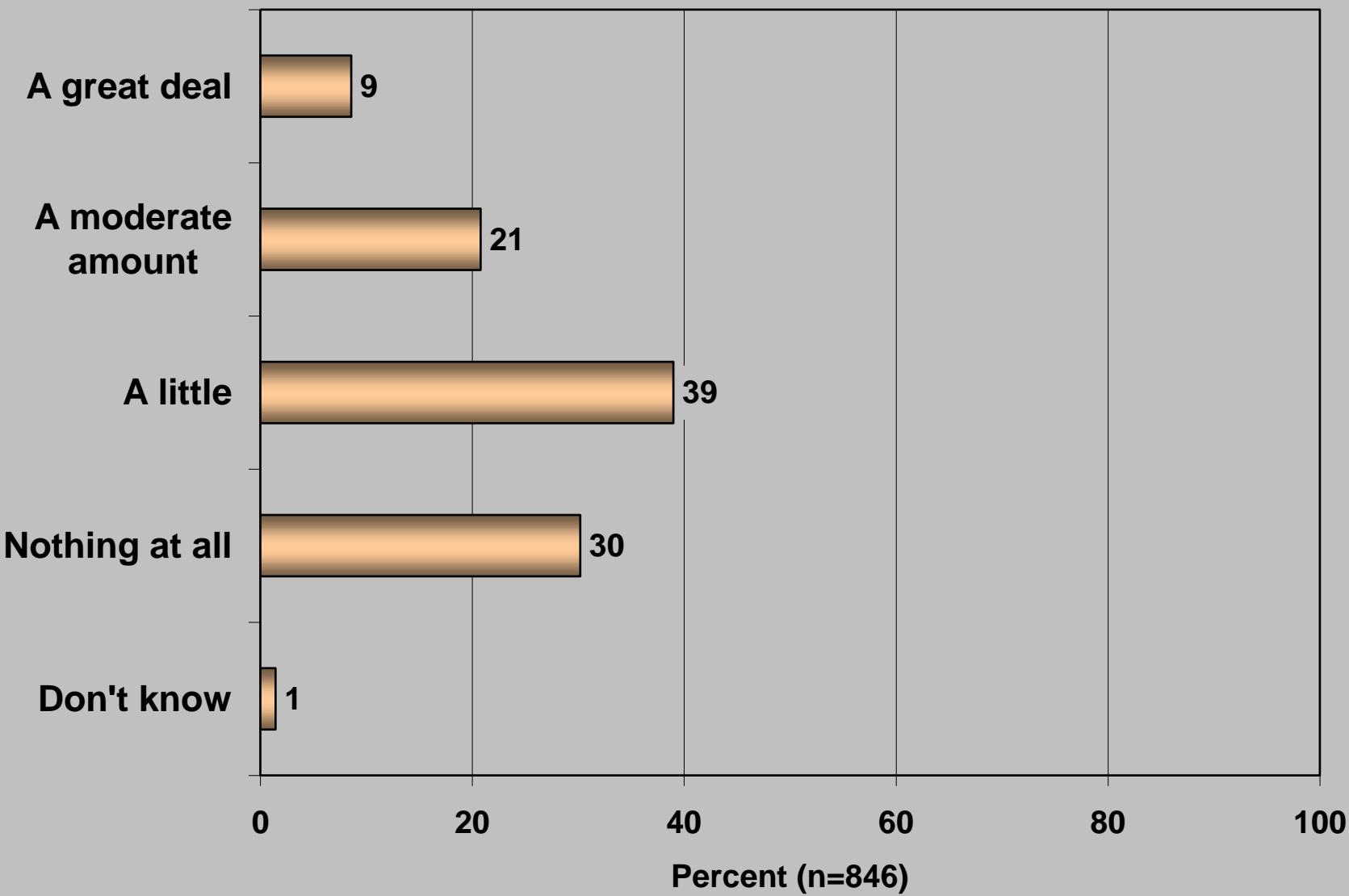
Q21. Thinking about this general area, in your opinion, what is the most important environmental issue facing the area?



Q23. Percent who named the following specific water-related issues as the most important environmental issue facing the area.



Q41. How much would you say you know about watersheds?



WATER ISSUES IN NORTHERN NEVADA

- Humboldt River Watershed
- Walker River Watershed
- Truckee River Watershed
- Carson River Watershed

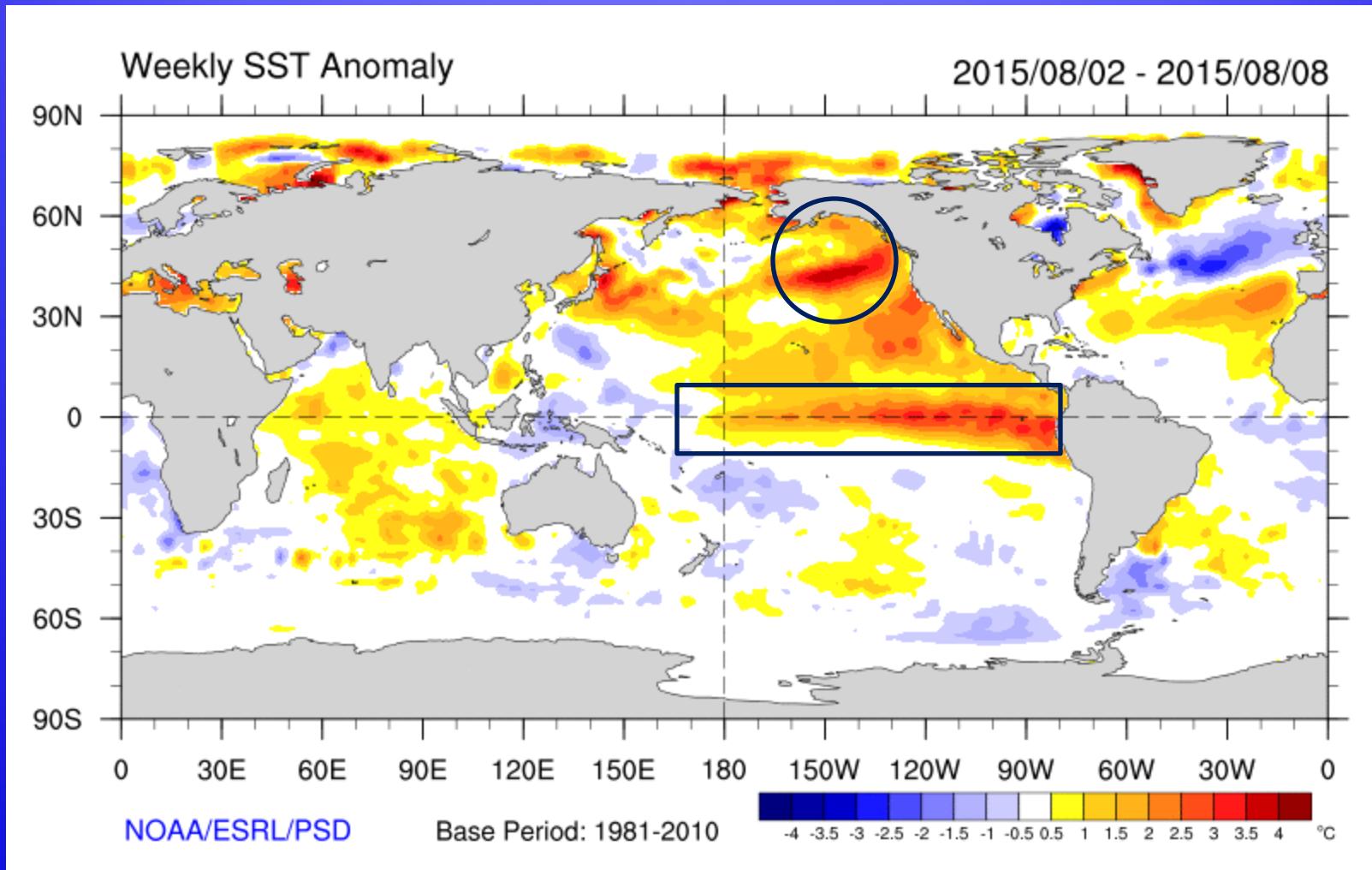
WHAT WILL HAPPEN THIS WINTER



WHAT ABOUT EL NIÑO

El Niño region

Warm Blob – Resilient Ridge

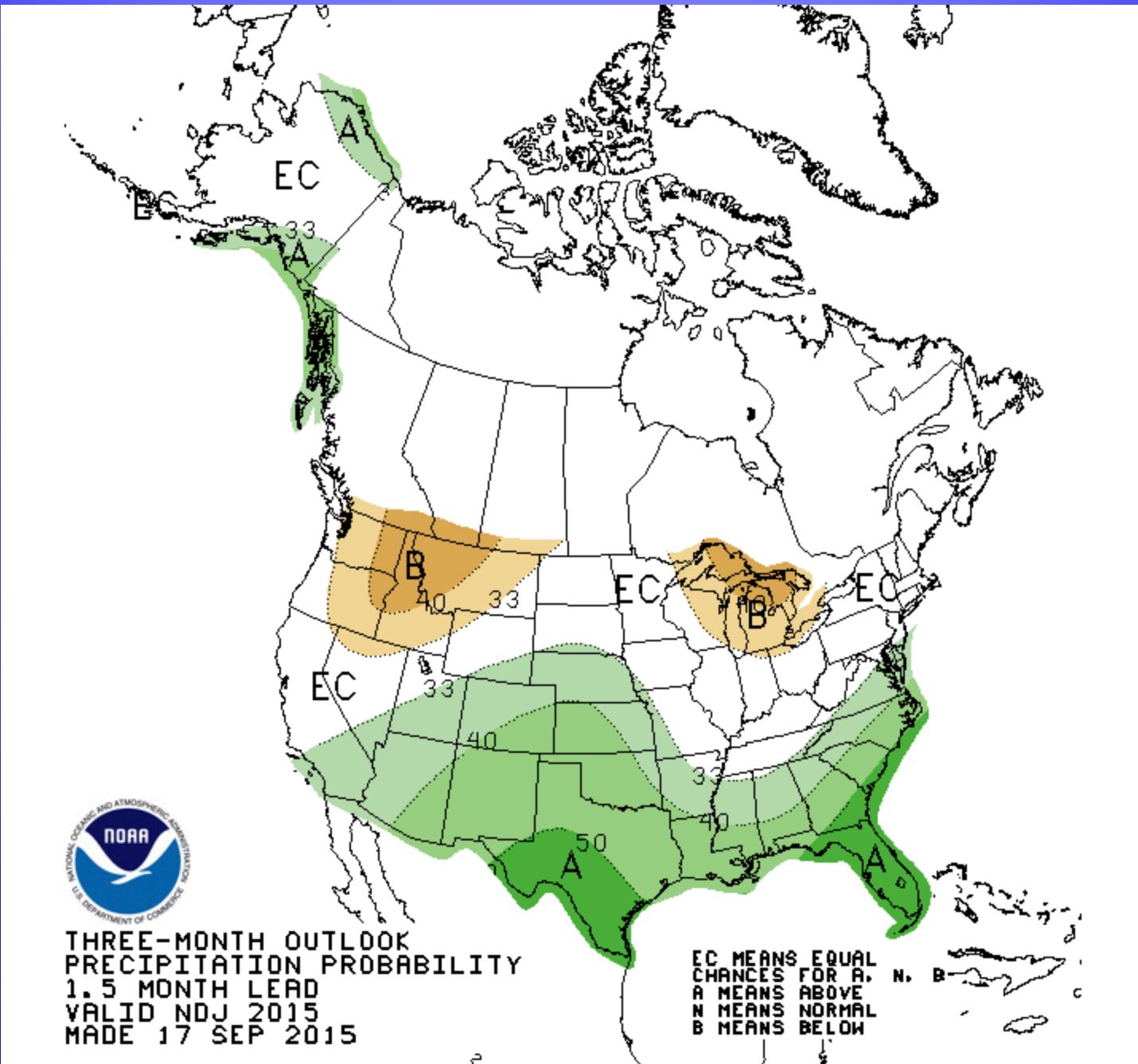


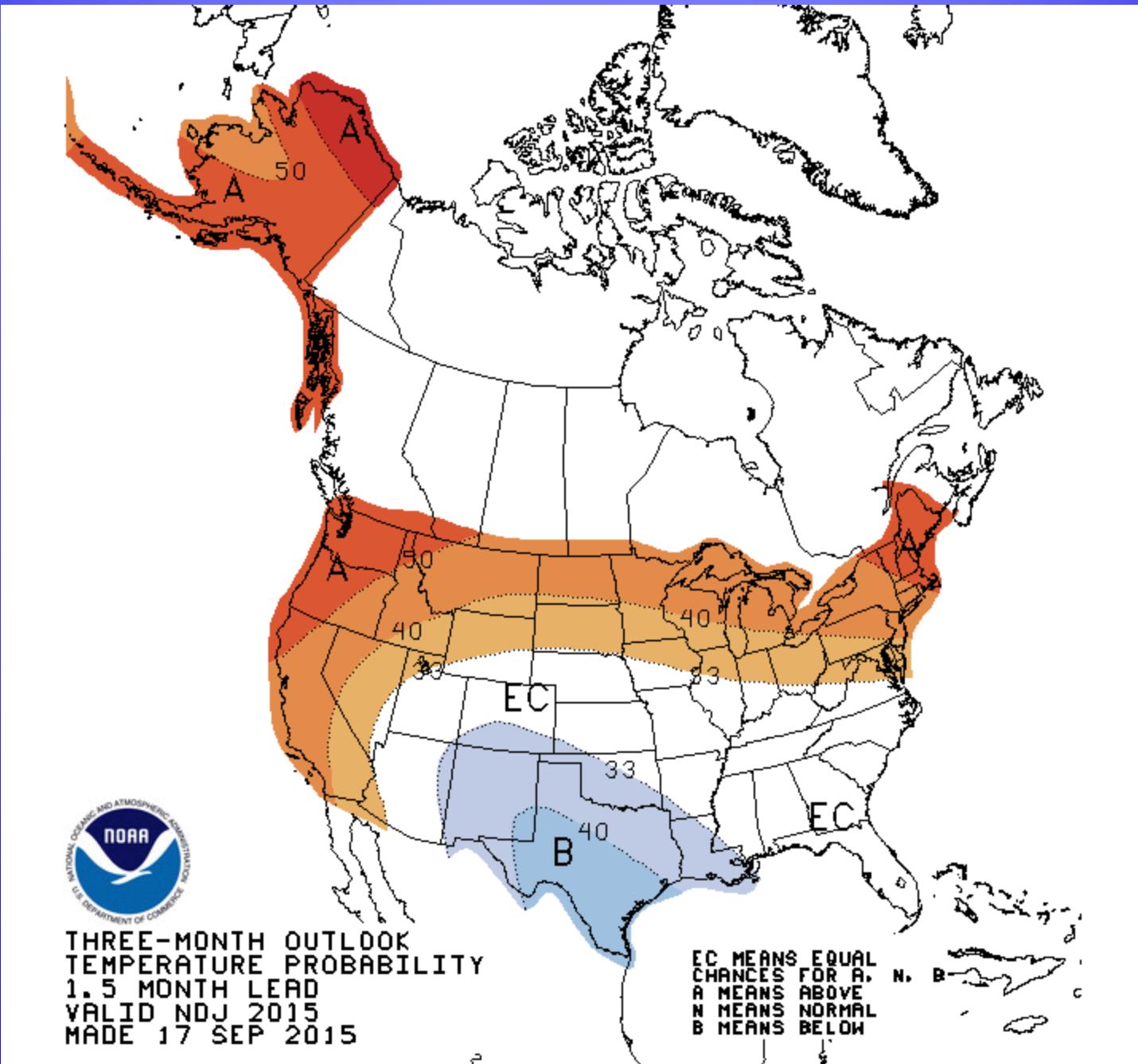
Reno National Weather Service
Forecasting for the Sierra and Western Nevada since 1905

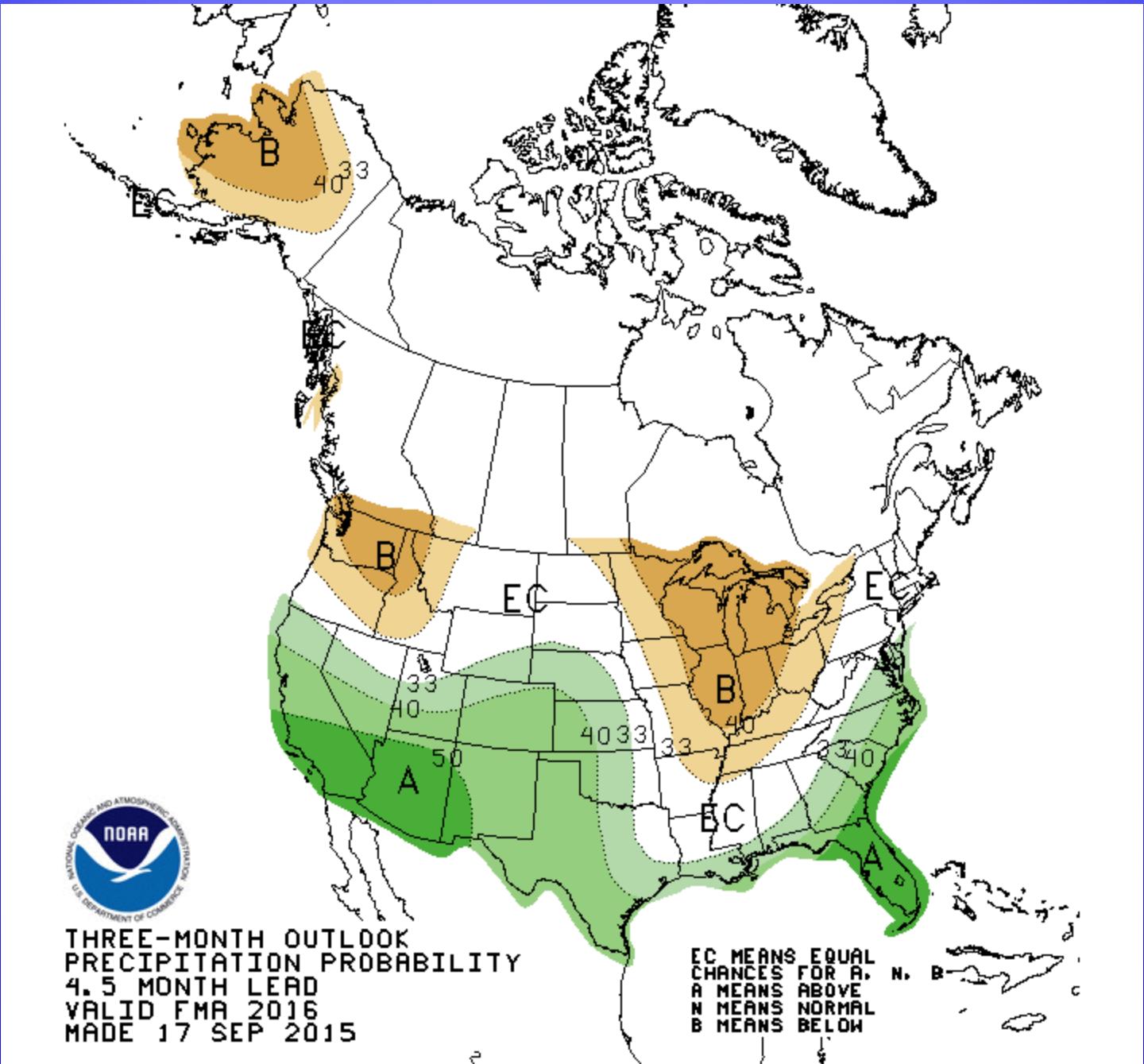
29

31





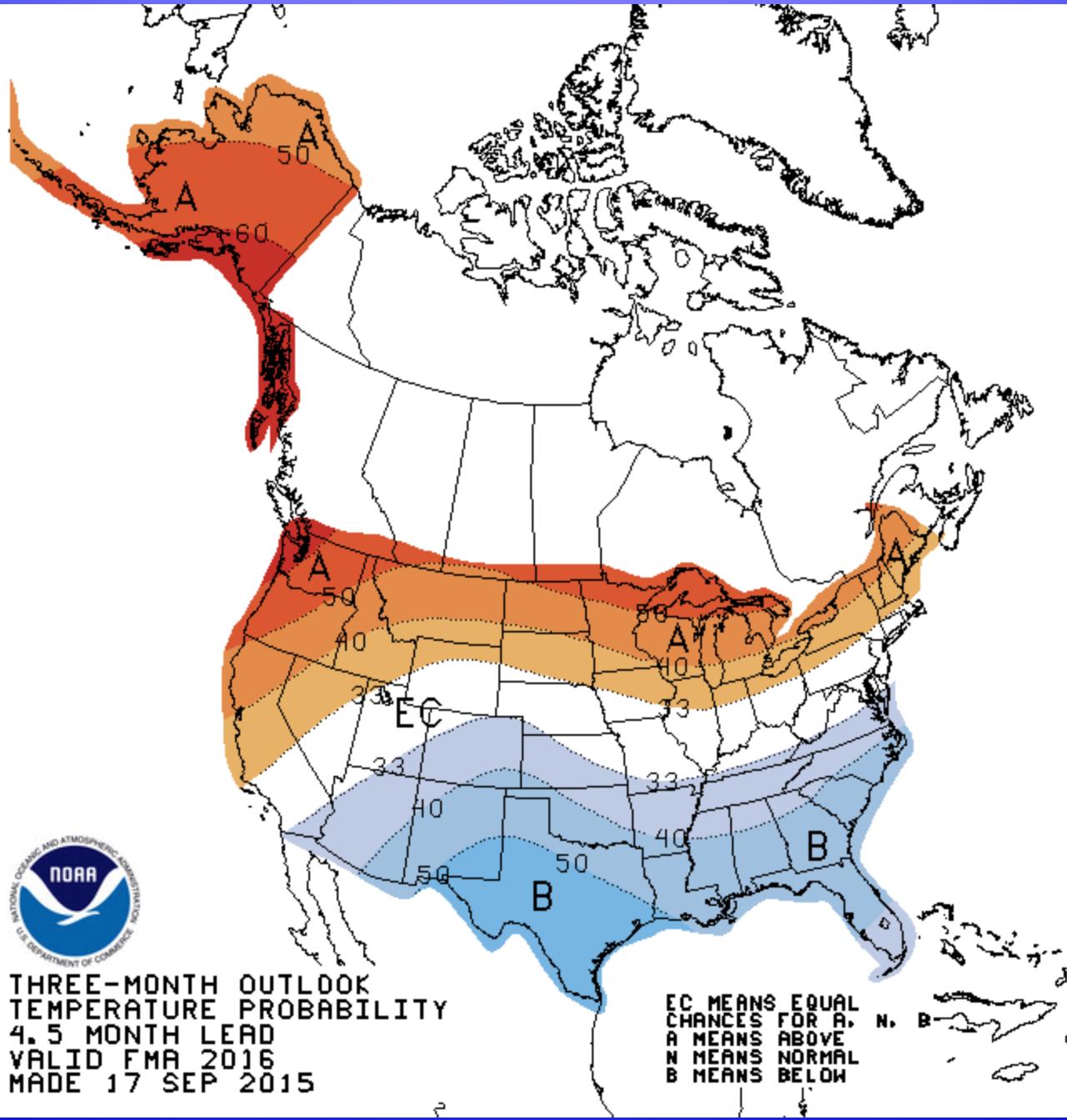






THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
4.5 MONTH LEAD
VALID FMA 2016
MADE 17 SEP 2015

EC MEANS EQUAL
CHANCES FOR A,
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW





QUESTIONS?

WWW.CWSD.ORG

Photo by: Juan Guzman