

**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 ☒ 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 Hyamano
(City Manager)

Date: 9/22/15

[Signature]
(District Attorney)

Date: 9/22/15

Nancy Paulson
(Finance Director)

Date: 9/22/15

Board Action Taken:

Motion: _____

- 1) _____
- 2) _____

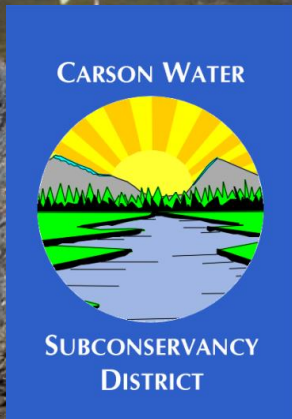
Aye/Nay

(Vote Recorded By)

UPDATE ON ACTIVITIES IN CARSON RIVER WATERSHED

EDWIN JAMES, P.E.
CWSD GENERAL MANAGER

2015



WHAT WE DO:

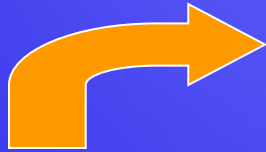
Promote cooperative action across agency and political boundaries in the Carson River Watershed, using integrated watershed management.



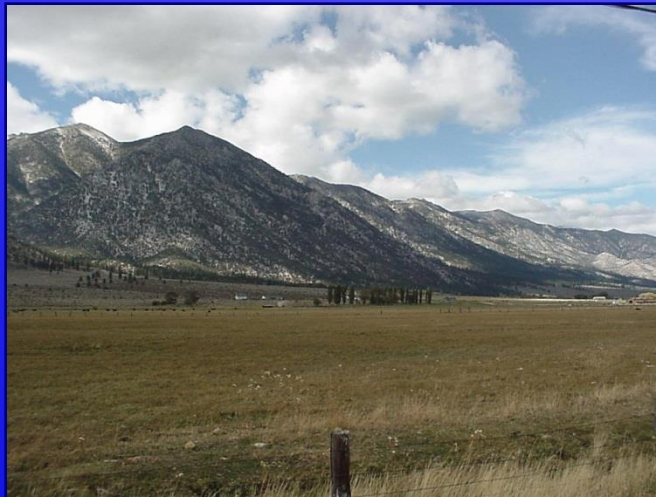


Coordinate the Carson River Coalition (CRC), a large stakeholder group of federal, state, county, and tribal agencies; non-governmental entities, private citizens, and landowners.

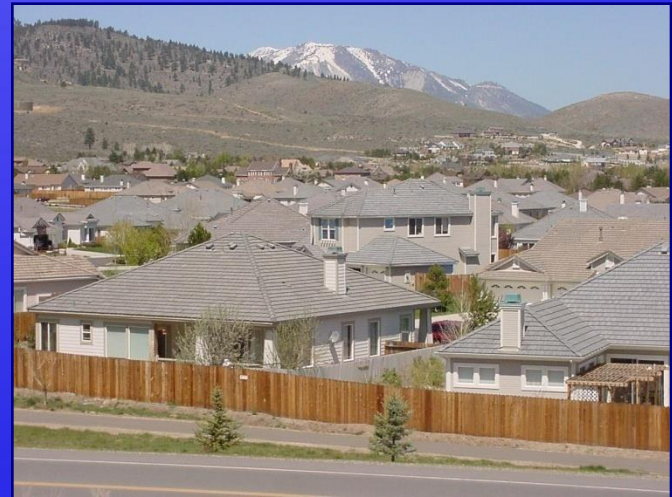
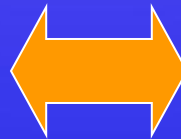
BALANCING WATER SUPPLIES



Environmental



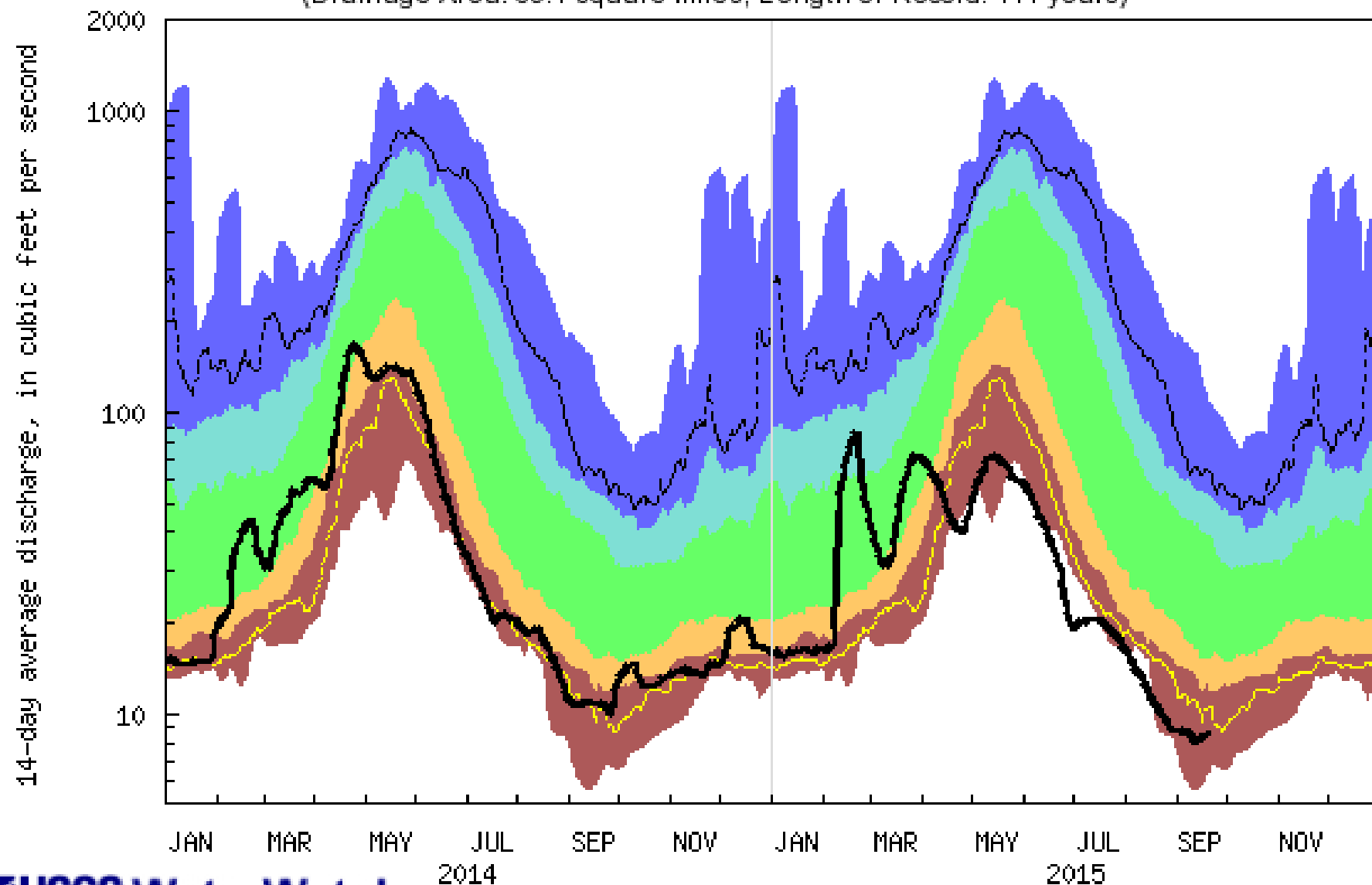
Agricultural



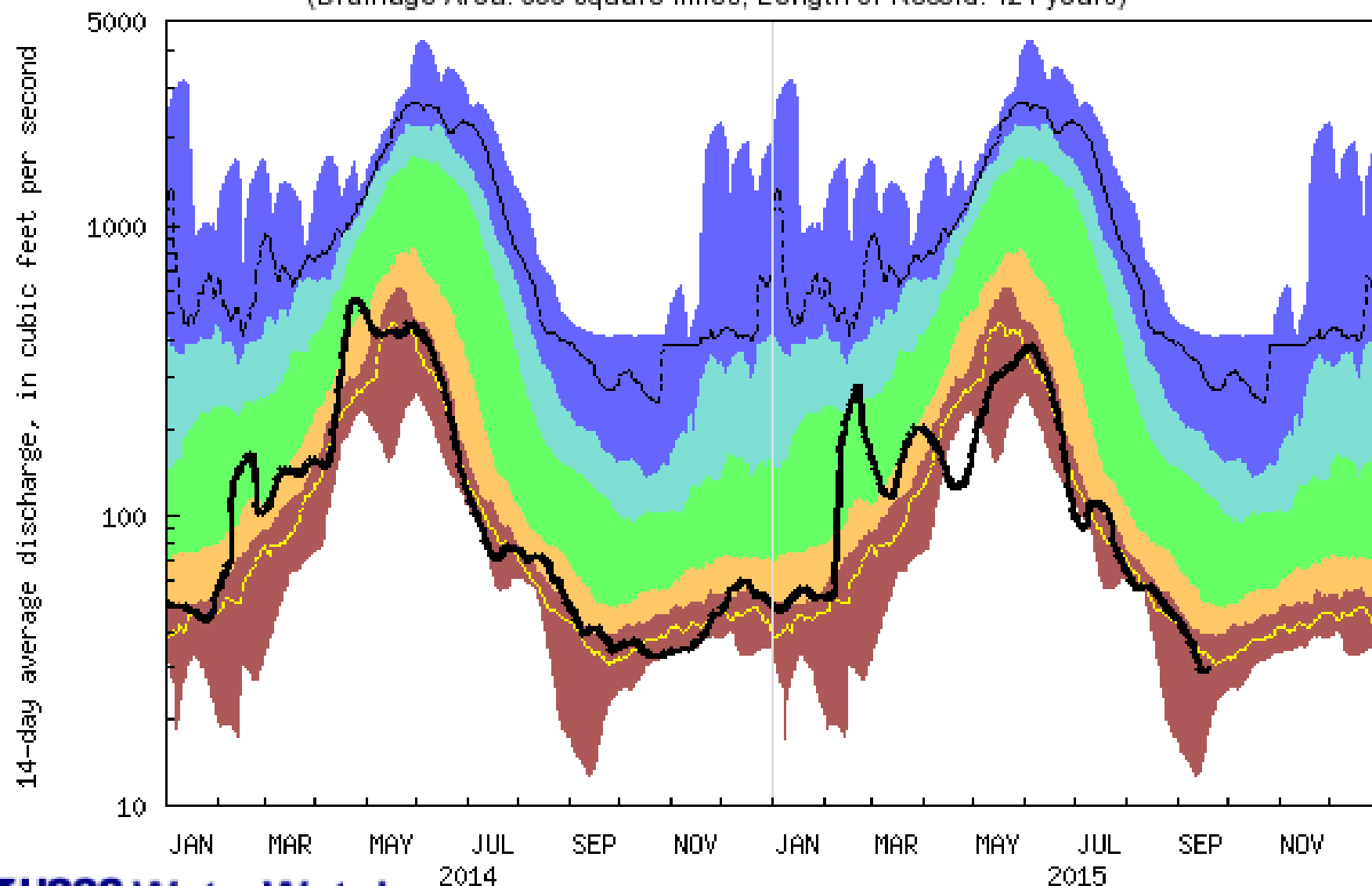
Domestic

DROUGHT

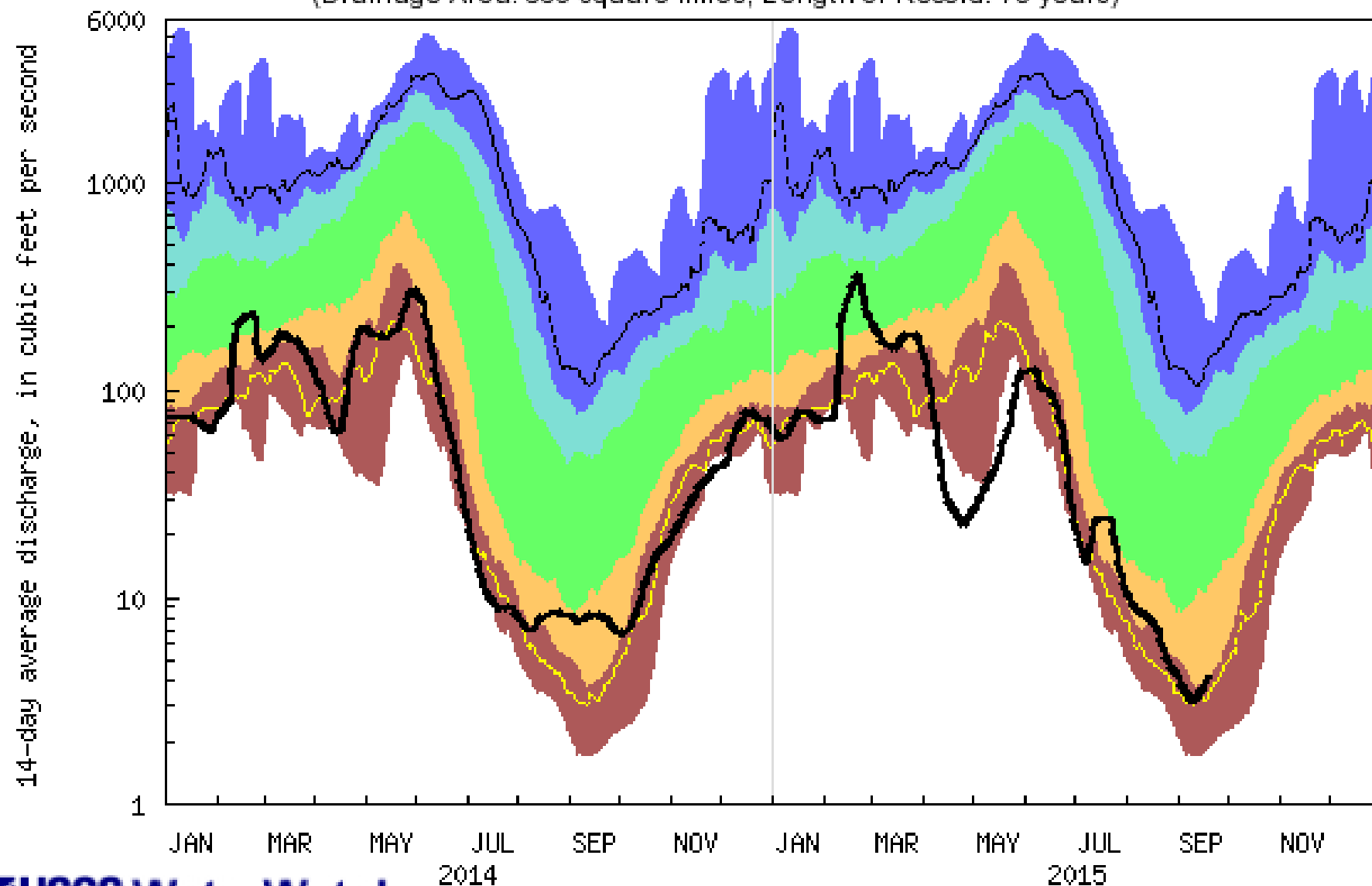
USGS 10310000 W FK CARSON RV AT WOODFORDS, CA
(Drainage Area: 65.4 square miles, Length of Record: 114 years)



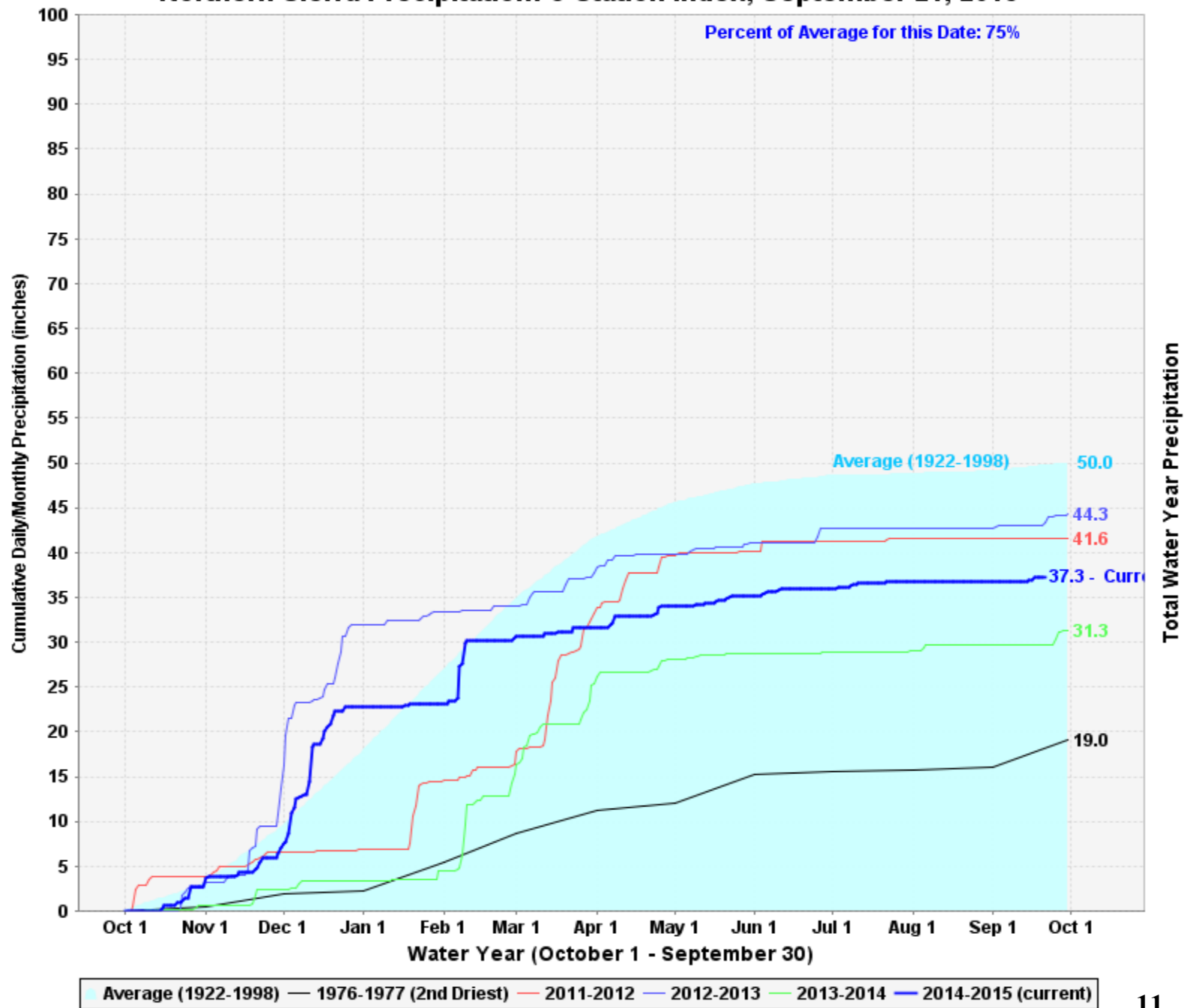
USGS 10309000 E FK CARSON RV NR GARDNERVILLE, NV
(Drainage Area: 356 square miles, Length of Record: 124 years)



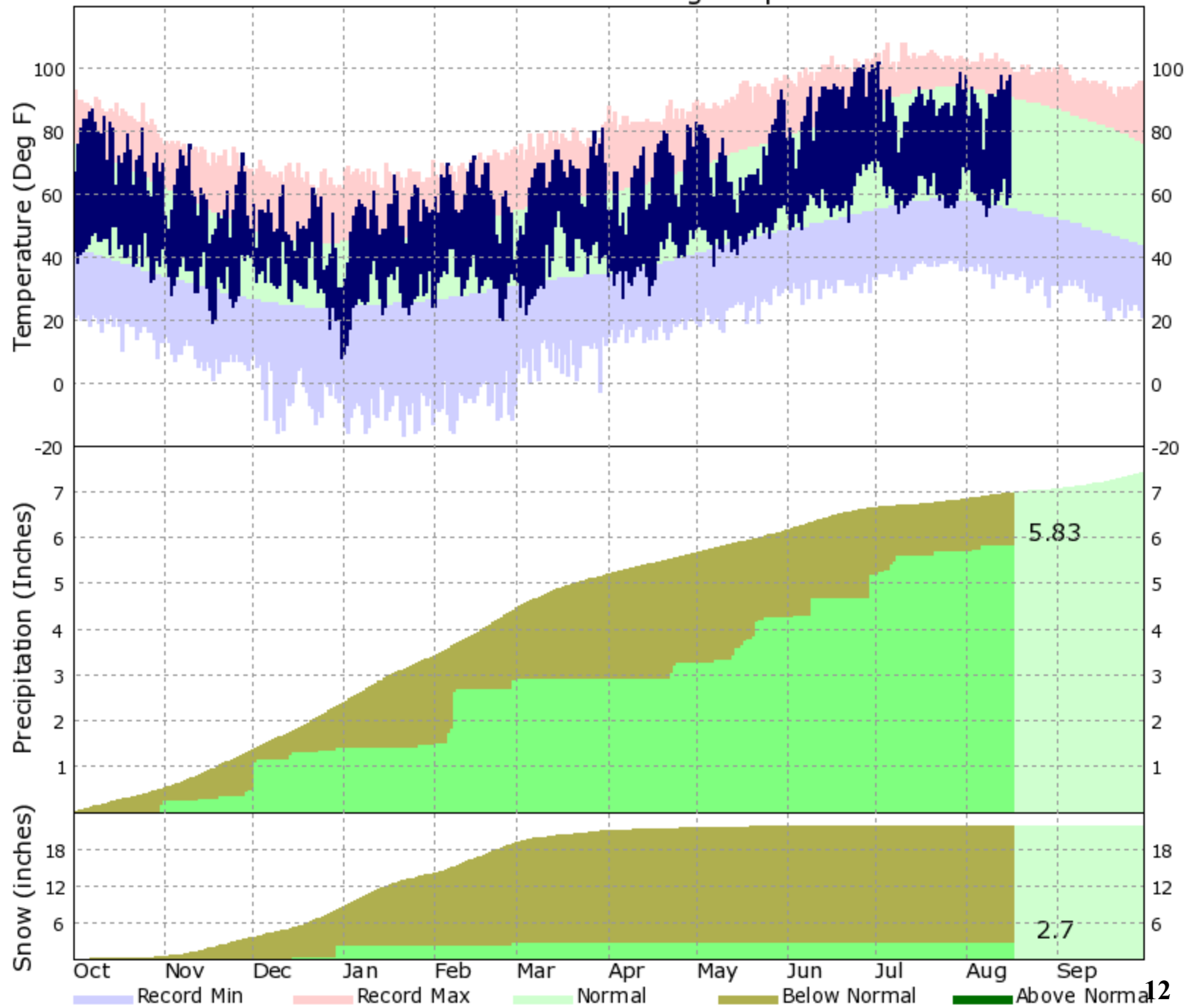
USGS 10311000 CARSON RV NR CARSON CITY, NV
(Drainage Area: 886 square miles, Length of Record: 75 years)



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



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

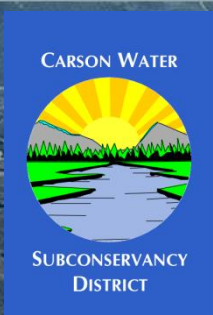
Churchill Valley Groundwater Basin		
Pumpage Inventory		
Category	Committed Ground Water Resource (AF)	Pumpage (AF)
Irrigation	3,938	581
Commercial/ Stock/ Industrial	446	54
Quasi- Municipal	6,461	530
Domestic Wells	N/A	1,405
Total	10,845	2,570

Perennial Yield = 1,600 AF

GROUNDWATER ASSESSMENT

- Overall the groundwater basins in the Watershed are not being over drafted.
- There are areas of concern:
 - Ruhenstroth 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!



the Flood Insurance Study report for this jurisdiction.
 If flood insurance is available in this community, contact your insurance agent or the National Flood Insurance Program at 1-800-638-6620.



MAP SCALE 1" = 500'

0 100 200 FEET

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
LYON COUNTY	32019C	0451	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.

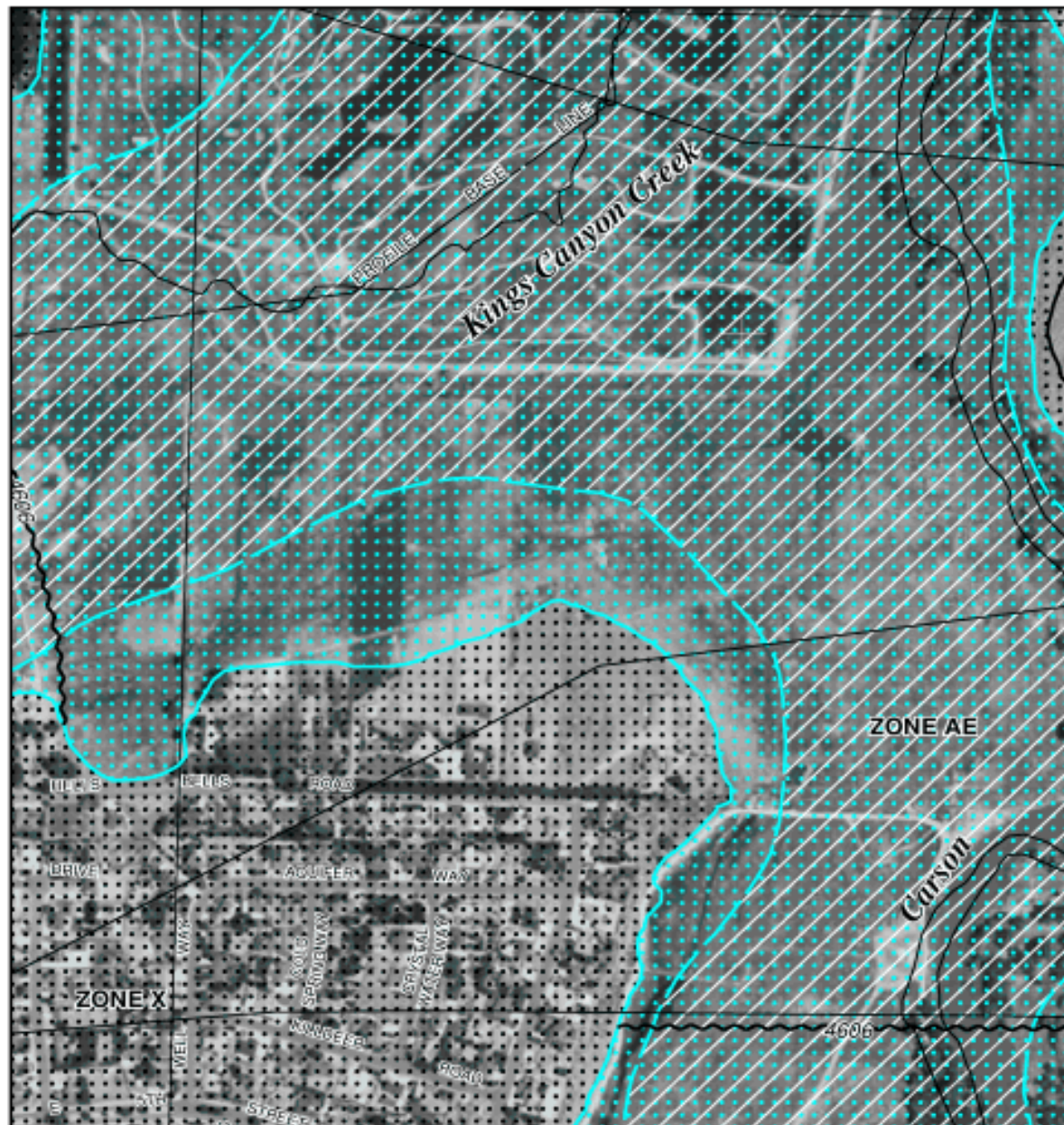


MAP NUMBER
 32019C0451E

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 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



Insurance is available in this community, contact your insurance agent or the National Flood Insurance Program at 1-800-638-6620.



MAP SCALE 1" = 500'



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
CARSON CITY	32000	0112	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.

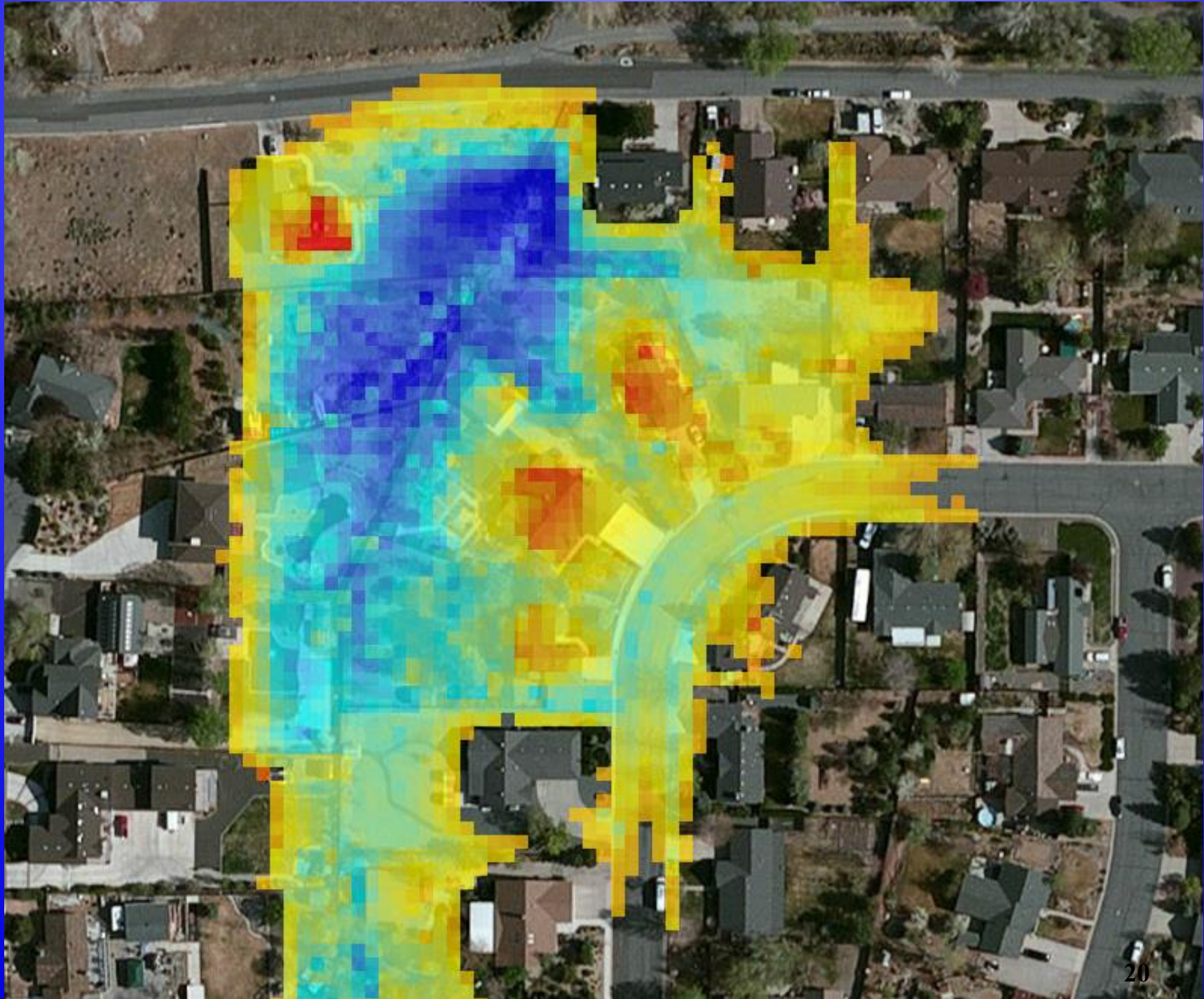


MAP NUMBER
3200010112E

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

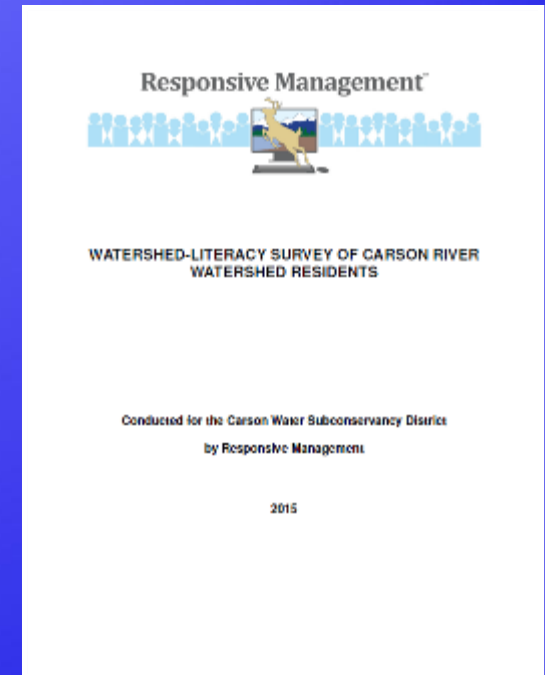


**MARK DAMIAN DUDA,
RESPONSIVE MANAGEMENT**

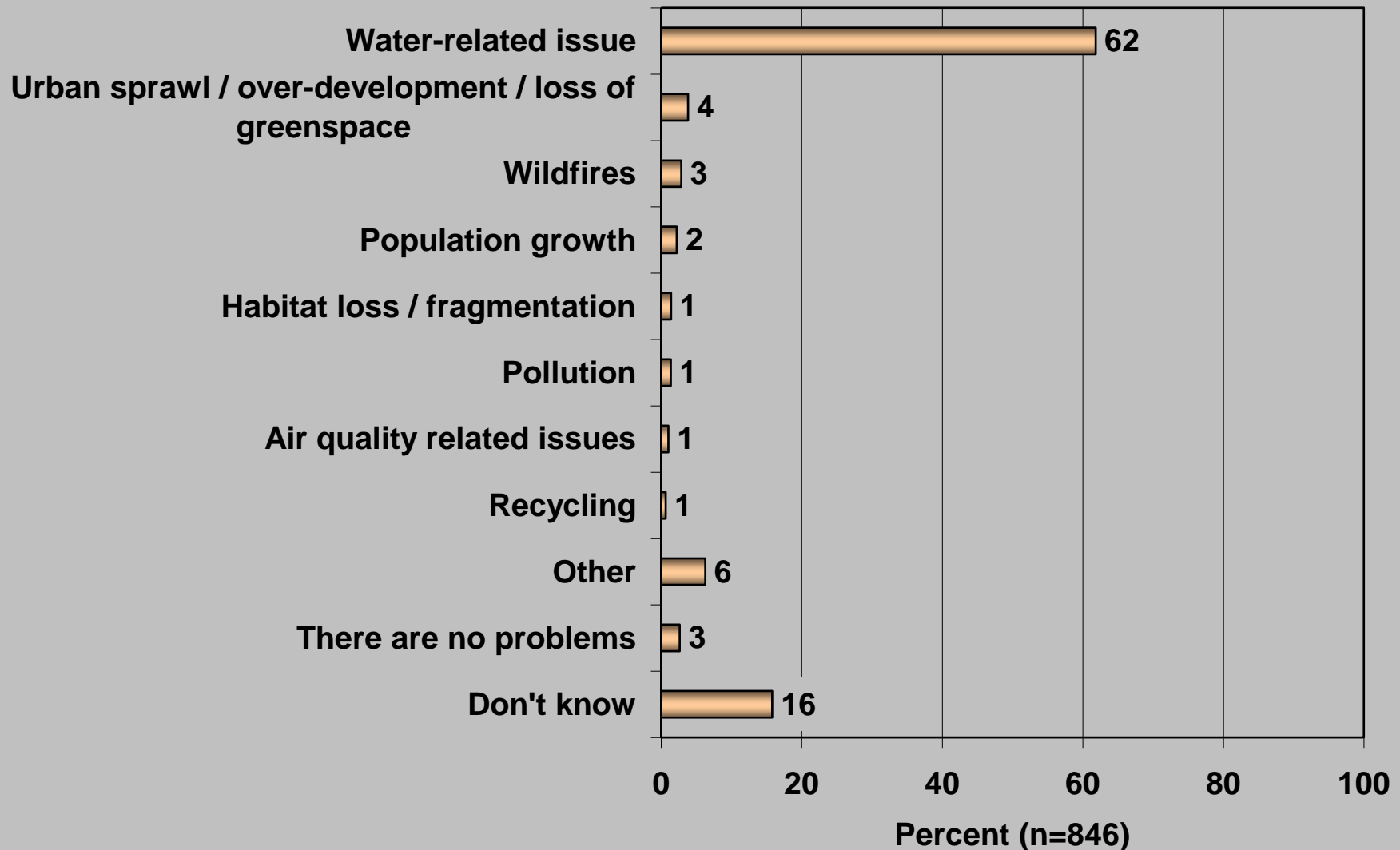
JULY 13, 2015

STUDY METHODOLOGY

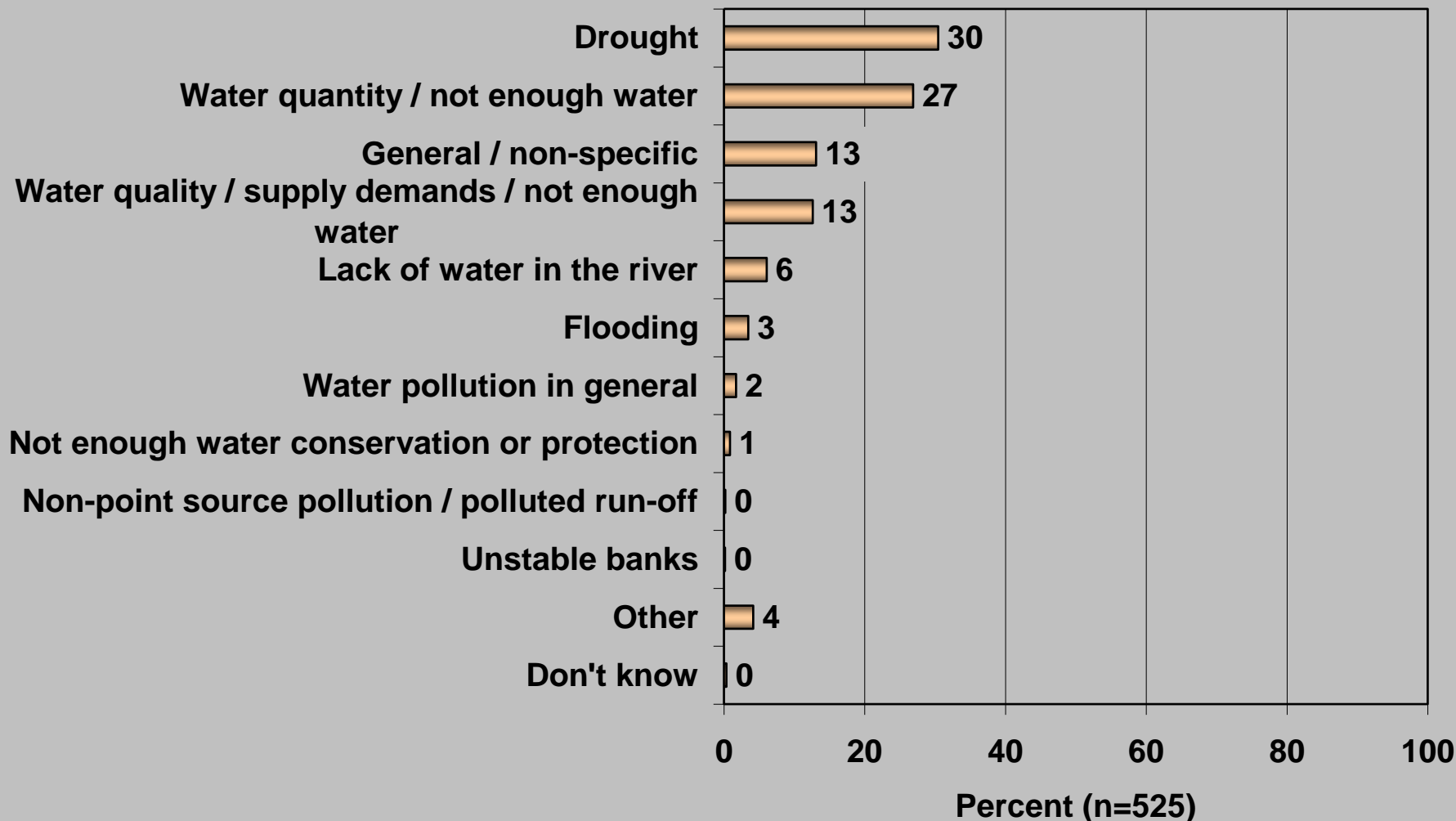
- Telephone survey conducted for the Carson Water Subconservancy District to determine Carson River Watershed residents' knowledge of and attitudes toward:
 - Watershed health
 - Knowledge of basic watershed concepts
 - Participation in activities or behaviors that may impact the watershed's environment
- 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



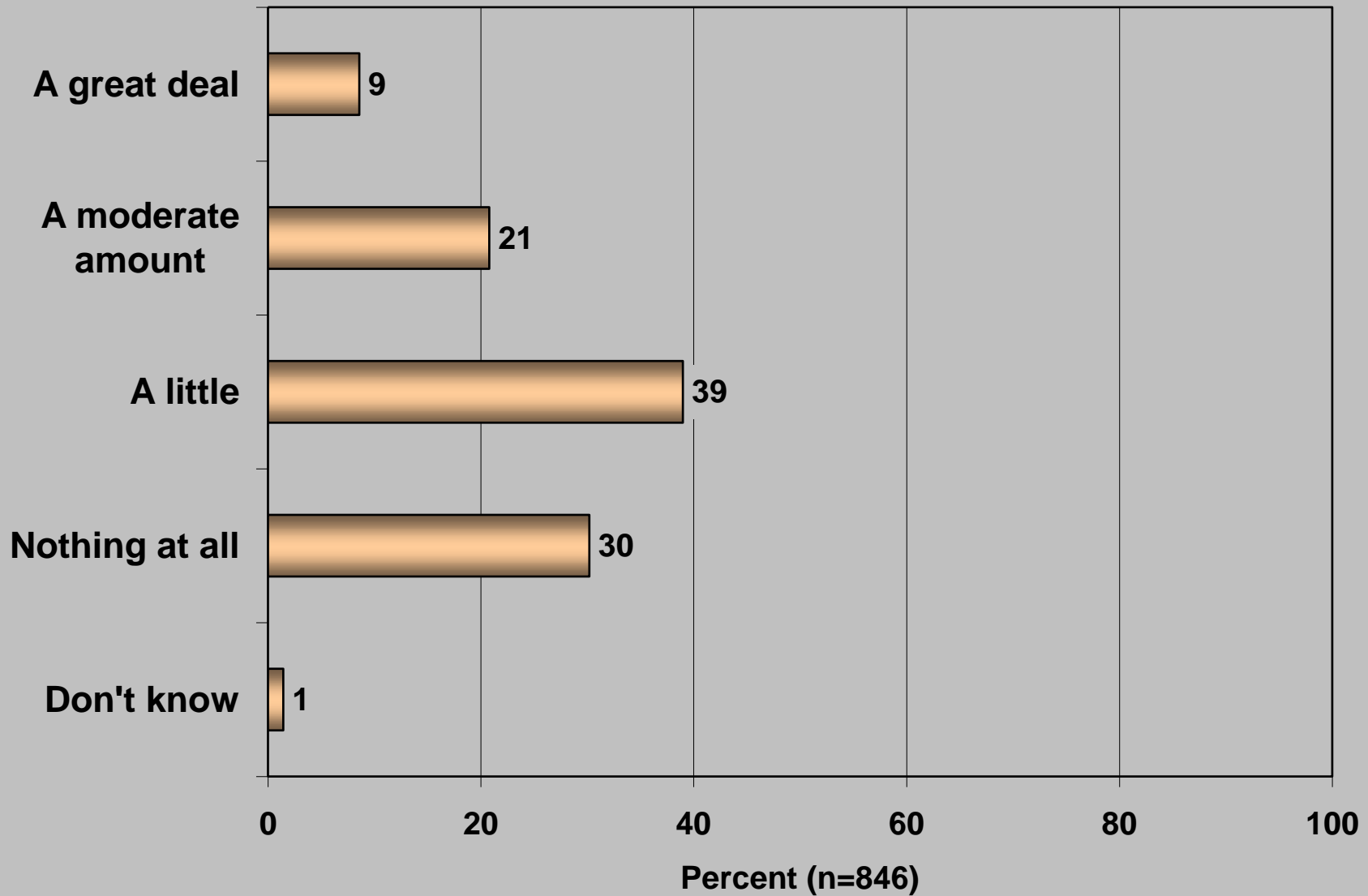
Q21. Thinking about this general area, in your opinion, what is the most important environmental issue facing the area?



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

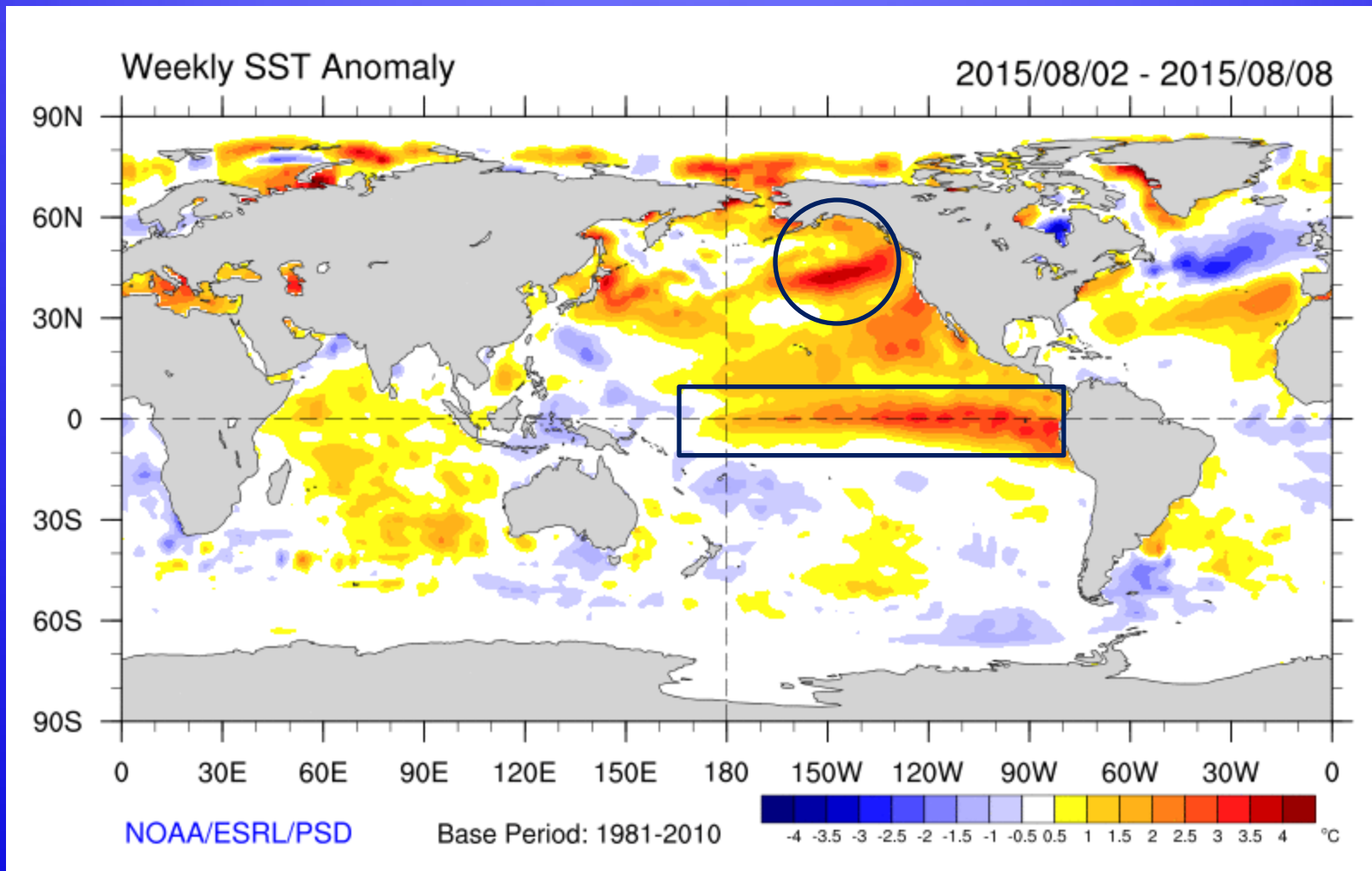
WHAT WILL HAPPEN THIS WINTER



WHAT ABOUT EL NIÑO

 El Niño region

 Warm Blob – Resilient Ridge



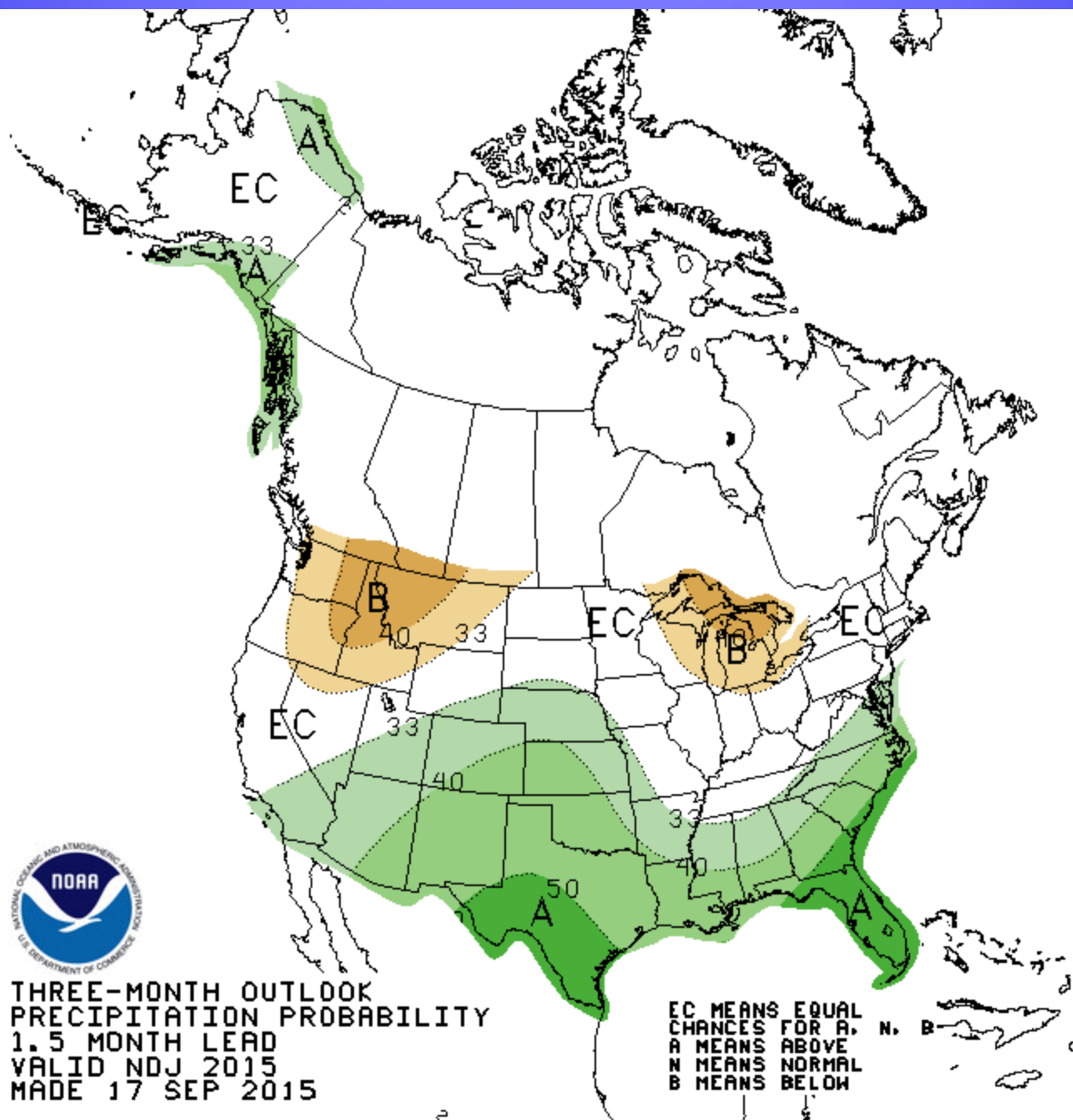
Reno National Weather Service

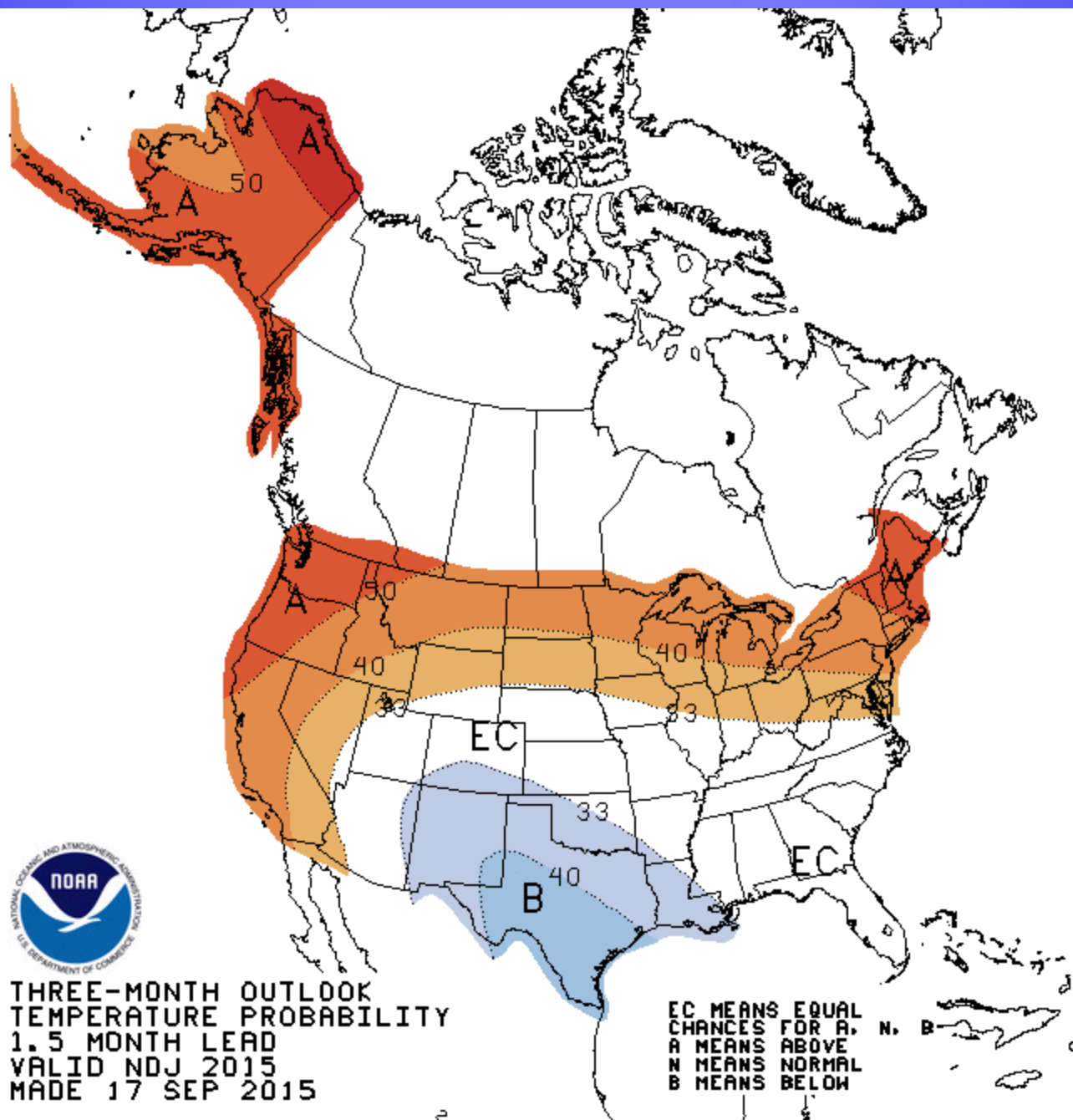
Forecasting for the Sierra and Western Nevada since 1905

29

31

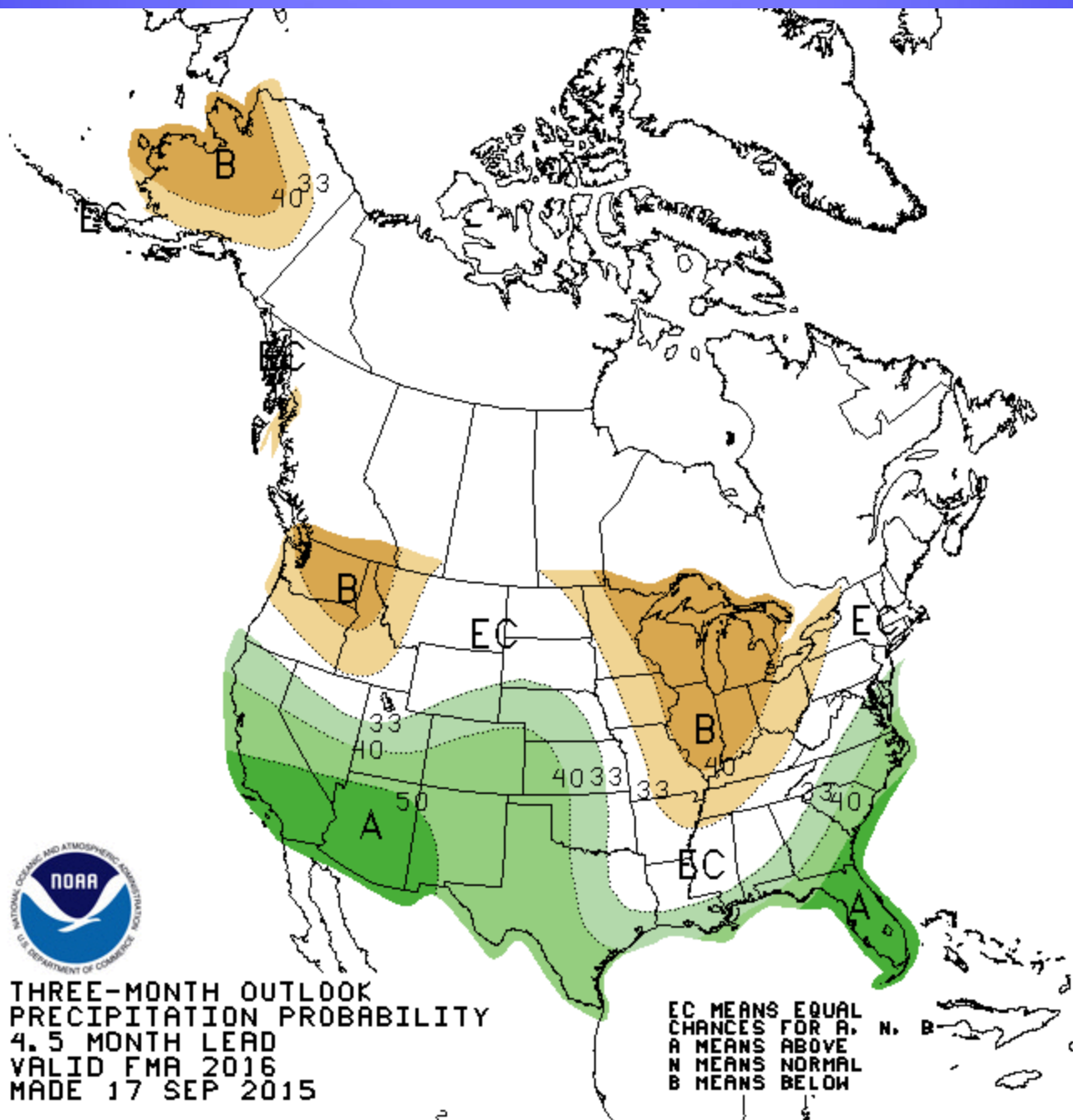






THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
1.5 MONTH LEAD
VALID NDJ 2015
MADE 17 SEP 2015

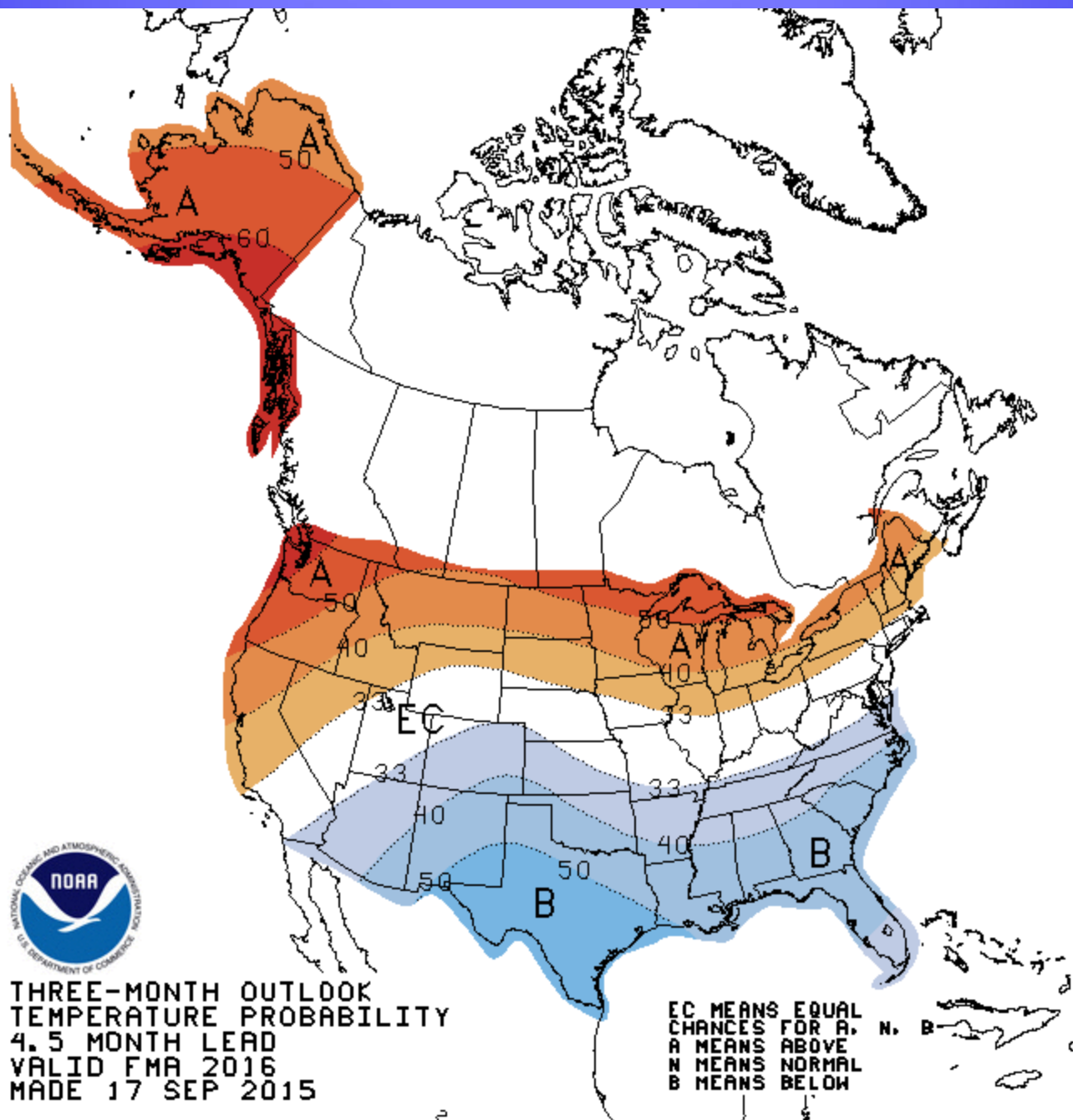
EC MEANS EQUAL
CHANCES FOR A.
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW



THREE-MONTH OUTLOOK
PRECIPITATION 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

N. B.



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

N. B.



QUESTIONS?

WWW.CWSD.ORG

Photo by: Juan Guzman