

**City of Carson City  
Agenda Report**

**Date Submitted:** November 25, 2013

**Agenda Date Requested:** December 5, 2013

**Time Requested:** 15 mins

**To:** Board of Supervisors

**From:** Lawrence A. Werner, City Manager

**Subject Title:** Presentation by Carson Water Subconservancy District (CWSD) staff regarding the Comprehensive Regional Water System Report and overview of the Bureau of Reclamation Plan of Study. *(Ed James)*

**Staff Summary:** For the past two years, CWSD staff has been working on the Comprehensive Regional Water System Report (Report). The Report was funded by the Bureau of Reclamation and CWSD. The purpose of the Report is to evaluate the future municipal water demands and compare them to future water supplies on a watershed-wide basis. Included in the report is an analysis of changes in runoff patterns for the Carson River, discussion on the possibilities of developing water leasing and water banking programs, discussion on regional water conservation programs, and discussion on potential regional water system interties. It is important to note that this Report is not to supersede any water purveyors' Water Master Plan, but provide a regional overview of the water supplies and future water demands in the watershed.

**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:** Presentation only

**Explanation for Recommended Board Action:** N/A

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

**Fiscal Impact:** N/A

**Explanation of Impact:** N/A

**Funding Source:** N/A

**Alternatives:** N/A

**Supporting Material:** Presentation

**Prepared By:** Janet Busse, City Manager's Office

**Reviewed By:**

(City Manager)

Date:

11/25/13

(District Attorney)

Date:

11/25/13

(Finance Director)

Date:

11/25/13

**Board Action Taken:**

Motion: \_\_\_\_\_

1) \_\_\_\_\_

Aye/Nay

2) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
(Vote Recorded By)

# OVERVIEW OF THE COMPREHENSIVE REGIONAL WATER SYSTEM PLAN

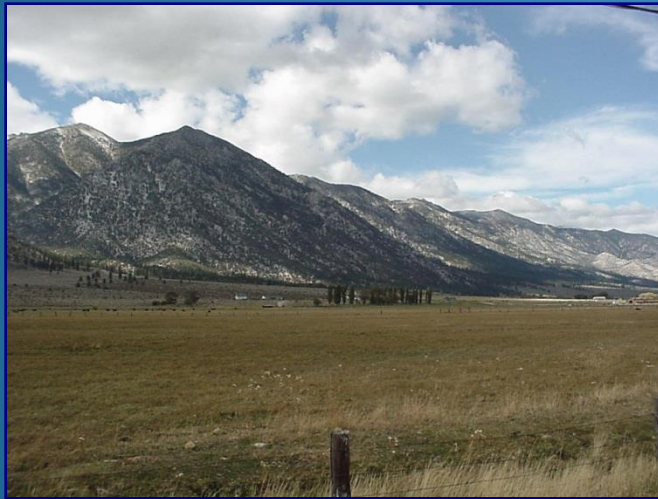
Presented  
By  
Edwin James  
Carson Water Subconservancy District



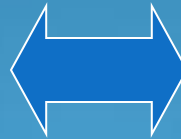
# BALANCING WATER DEMANDS



**Environmental**



**Agricultural**



**Domestic**



# We Live in a Watershed of Extremes



# Study Overview

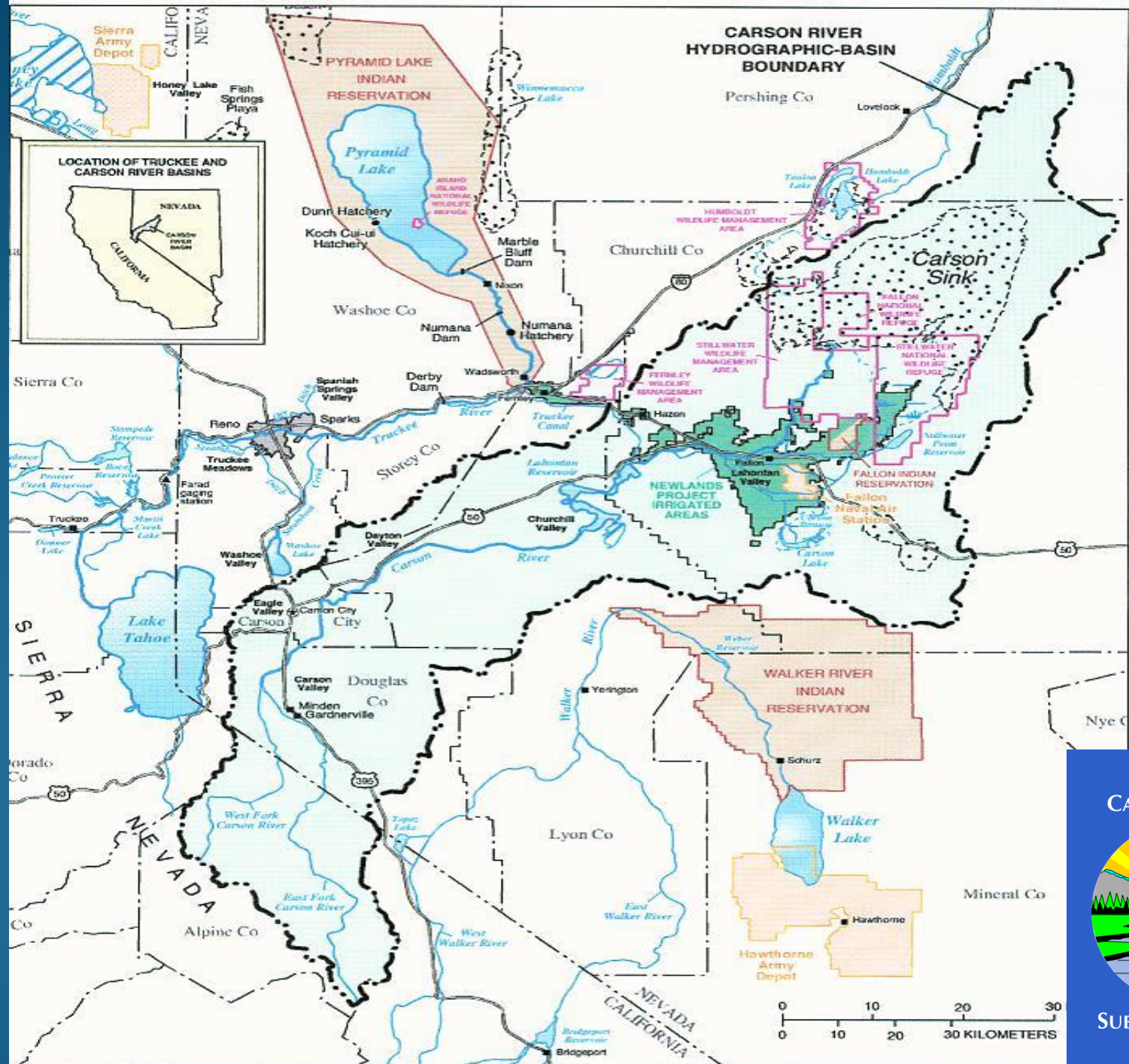
- Highlights

- Evaluate ways to meet future municipal water demands while minimizing the impact on the environment and agriculture.
- Plan is not to supersede any water purveyors water master plan.

- Grant Requirements

- Runoff Patterns & Climate Changes
- Develop a Regional Water Conservation Plan
- Evaluate Possible Water Leasing and Banking Programs.
- Evaluate Future Regional Projects





CARSON WATER



SUBCONSERVANCY  
DISTRICT

# Watershed Overview

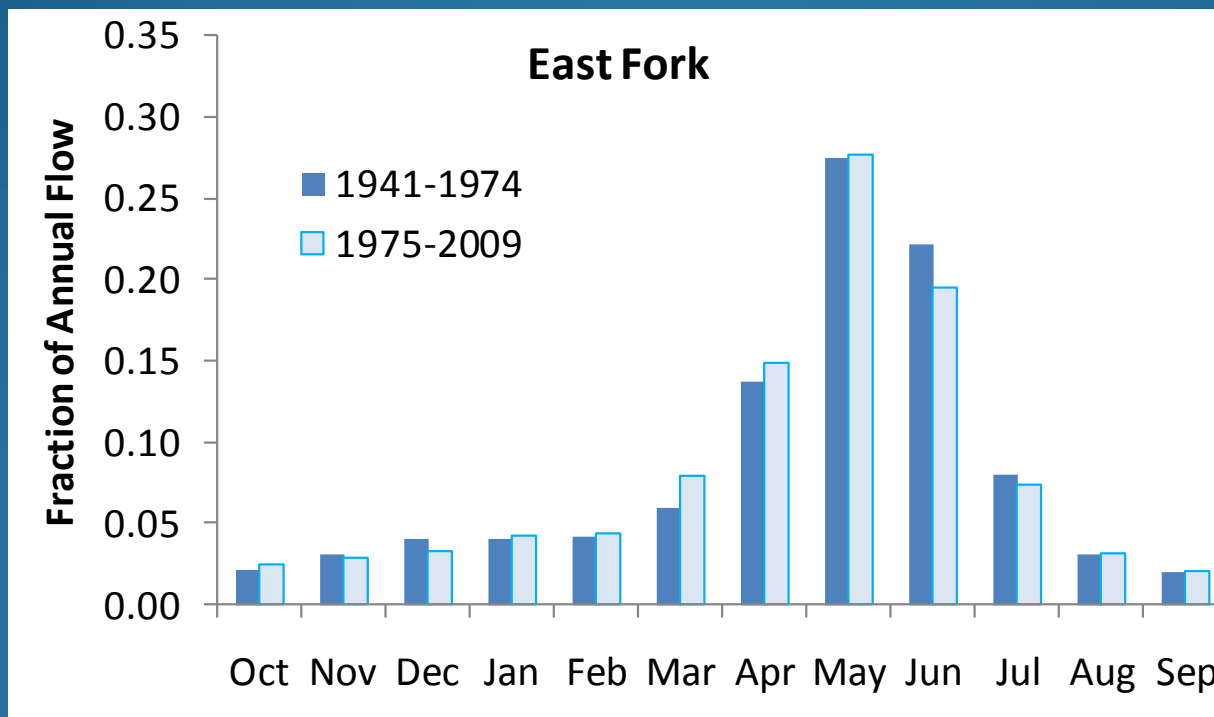
- Currently all water systems have sufficient water supply.
- Limited upstream storage.
- Runoff patterns in the Carson River has been changing.
- All groundwater and surface water has been fully allocated.
- All groundwater basins water appropriations exceed the perennial yields (but not production).
- Reclaimed water is a valuable water source and will continue to increase in the future.
- The largest threat to water supply is water quality.



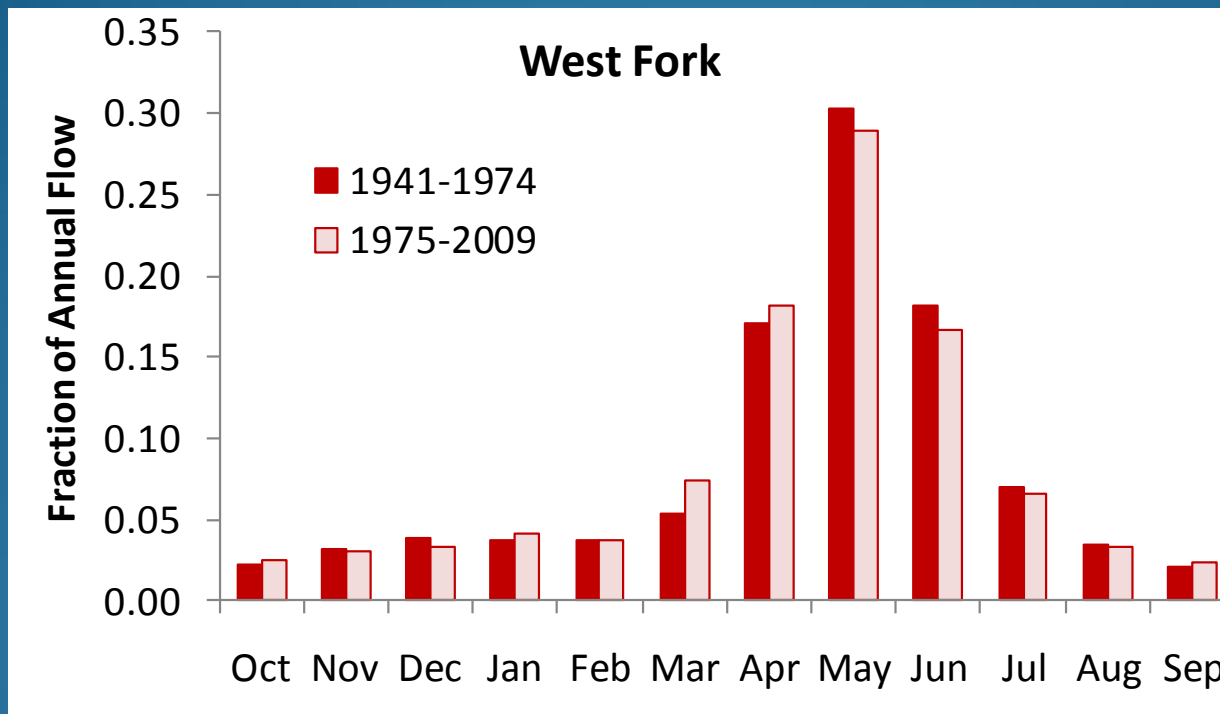
# RUNOFF PATTERN CHANGES



# Monthly Streamflow – East Fork



# Monthly Streamflow – West Fork



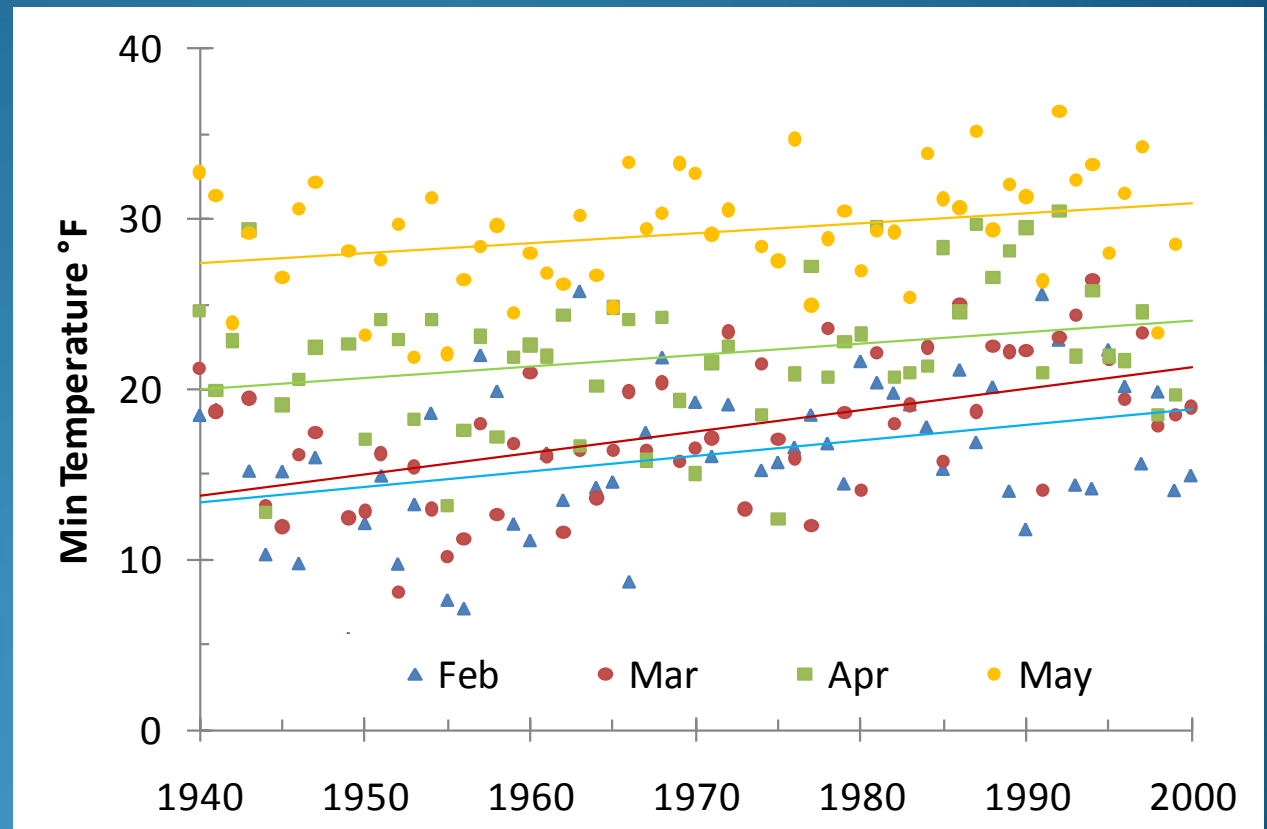


# Temperature

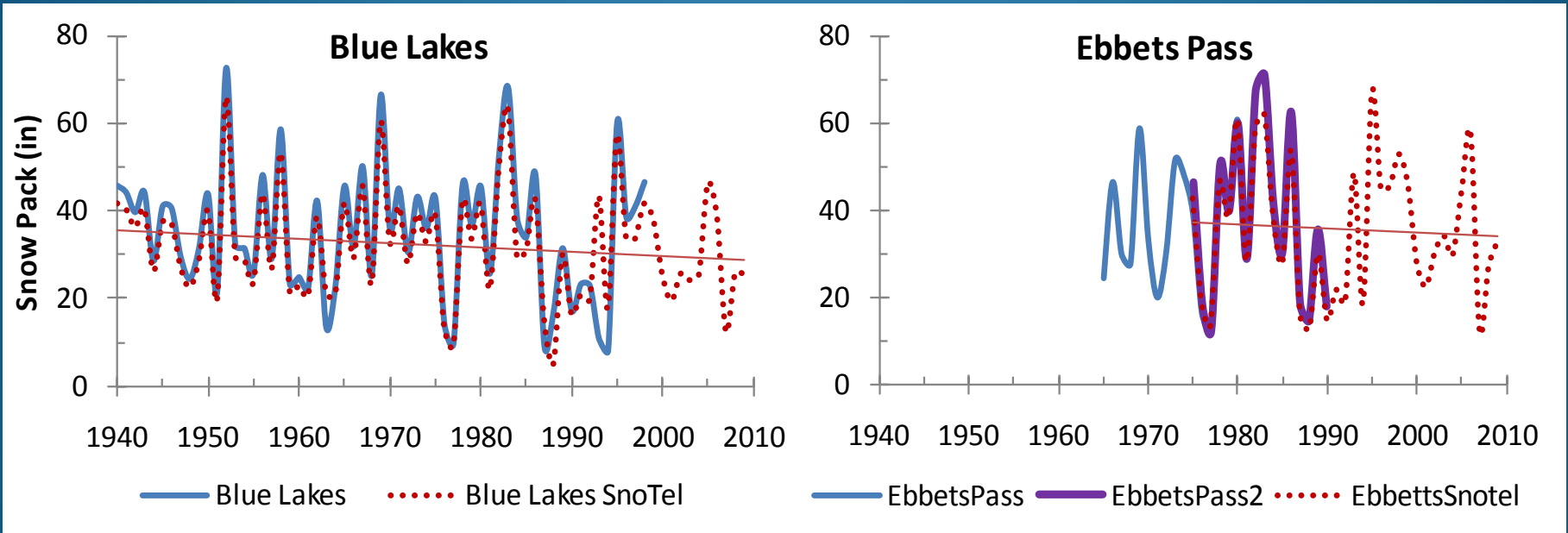
- Twin Lakes
- Minimum Temperature

- May
- April
- February
- March
- Annual

Statistically significant

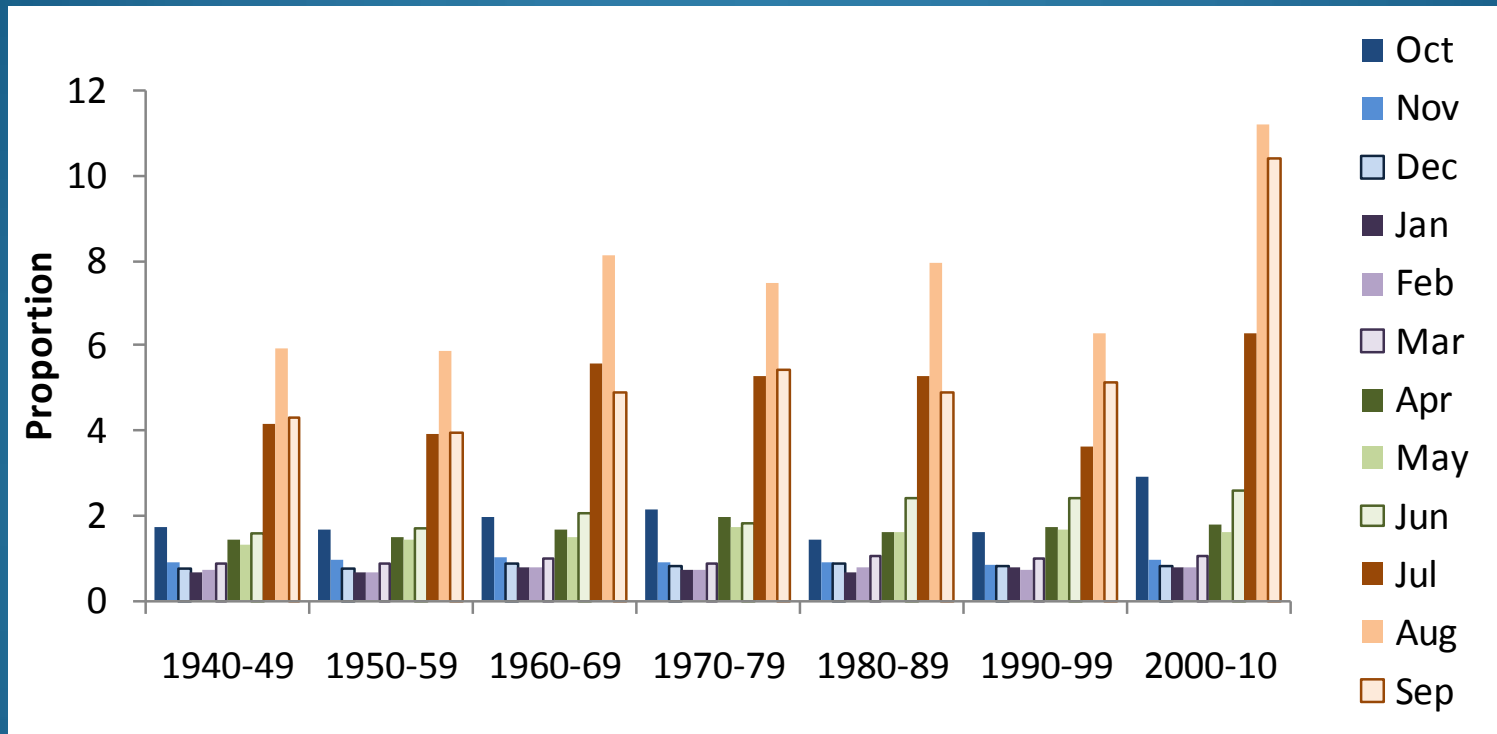


# Snow Pack Over Time



# Relationship Between Gauges

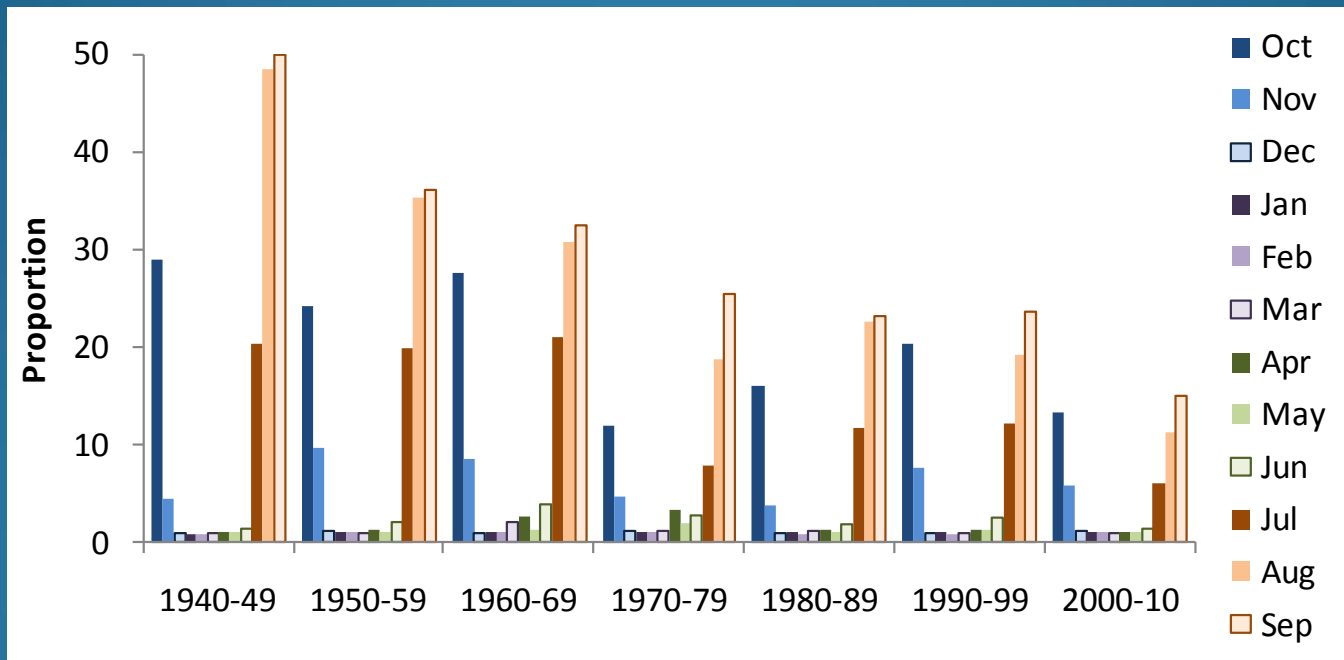
West Fork & East Fork / Carson





# Relationship Between Gauges

Carson City / Fort Churchill



# Regional Water Conservation Programs:



## Goals:

- Provide water conservation programs for consideration by water purveyors
- Promote consistent water conservation message throughout the watershed

# Regional Water Conservation Objectives:

- Preserve water and avoid water waste to balance the resources among agricultural users, environmental needs, and municipal customers.
- Identify programs which complement purveyors conservation plans and programs.
- Identify measures and methods which motivate water customers to avoid waste and conserve water.



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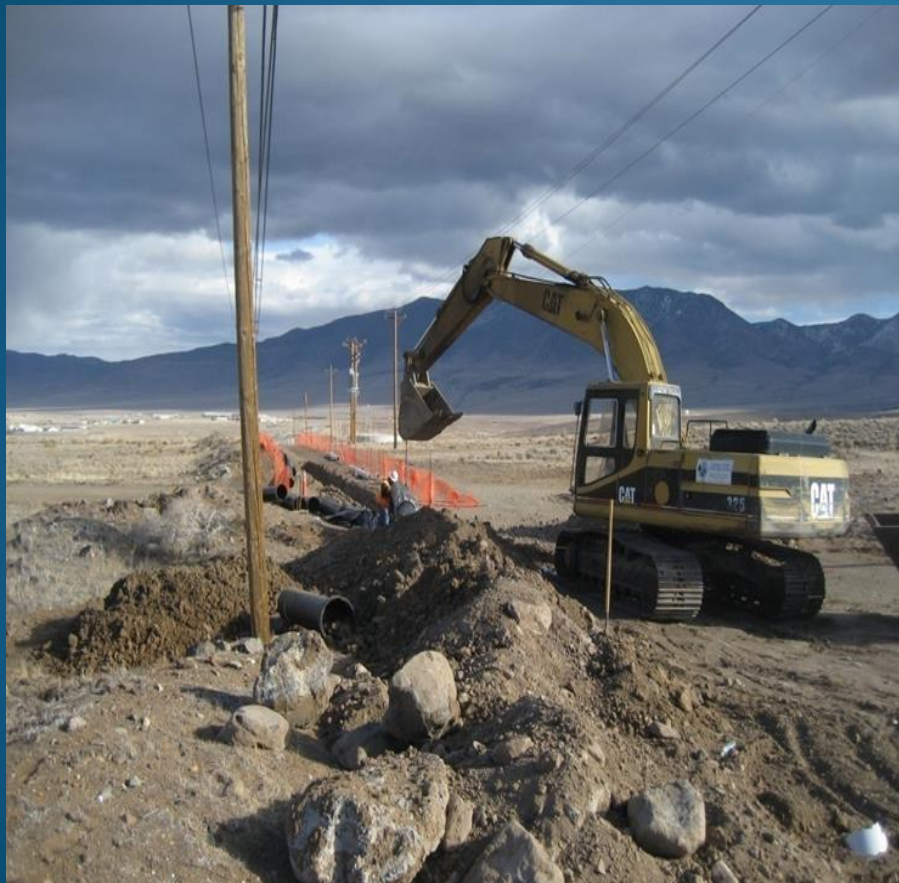


# CWSD Regional Water Conservation

## Suggested Actions:

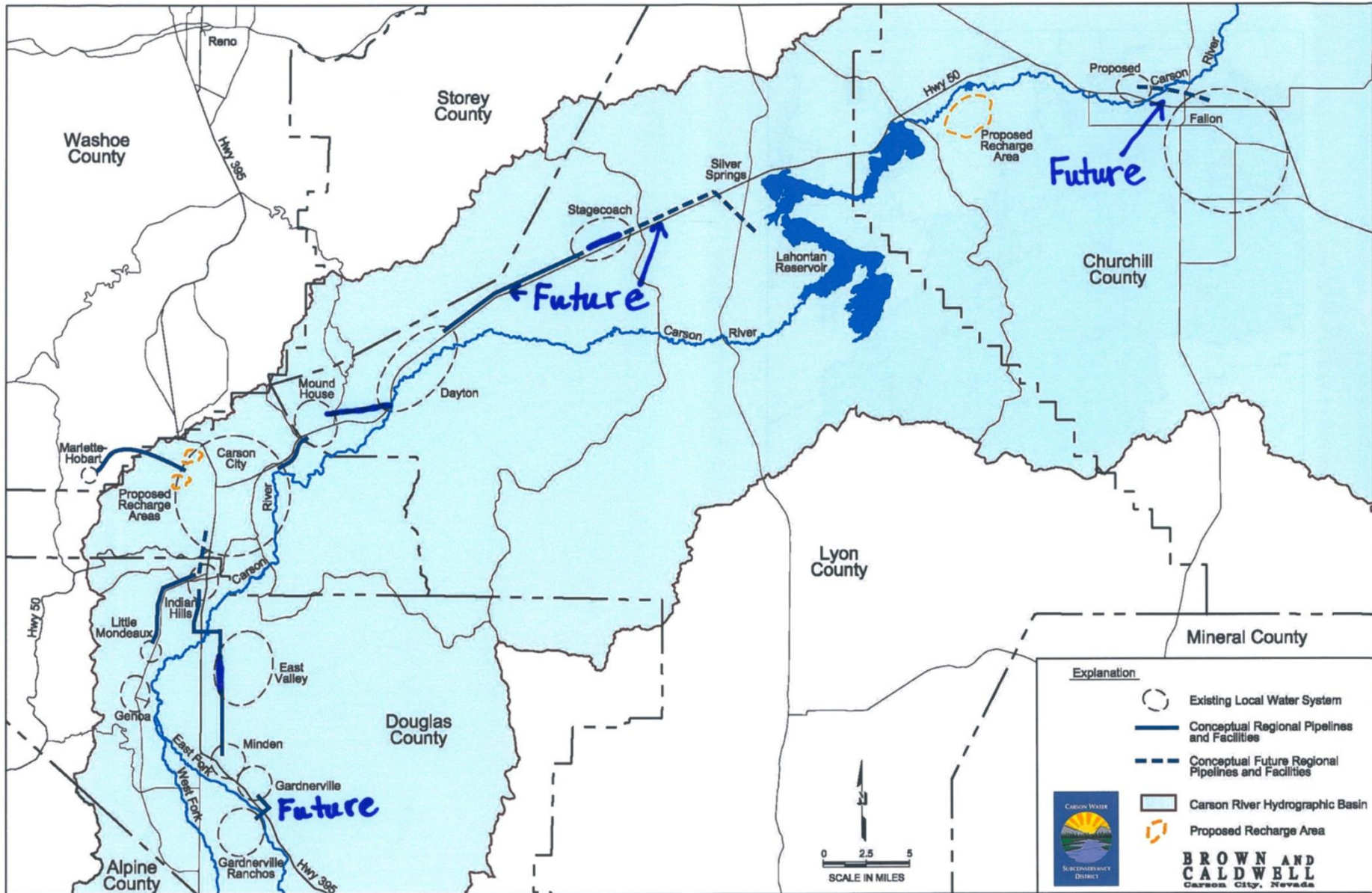
- Promote Education and Outreach
- Promote Water Metering and Volumetric Rates
- Promote Residential Landscape Surveys
- Promote Lyon County demonstration project
- Pursue grants to help fund:
  - Large Landscape Audits
  - ET Controllers
  - Water Conservation Awareness Programs

# REGIONAL WATER SYSTEMS





# Regional Infrastructure





# CWSD Regional Water System

## Suggested Actions:

- Present the Report to all the water purveyor boards.
- Promote water conservation.
- Promote coordination among various water purveyors to meet future water demands.
- Work with BOR, water purveyors, and counties on identifying future regional water projects.

# RECLAMATION

*Managing Water in the West*

## Carson River Basin Study Plan of Study



**August 22, 2013**



U.S. Department of the Interior  
Bureau of Reclamation

# QUESTIONS

