

**Carson City
Agenda Report**

Date Submitted: May 24, 2011

Agenda Date Requested: June 2, 2011

Time Requested: 20 Minutes

To: Mayor and Supervisors

From: Larry Werner, City Manager

Subject Title: Presentation on the Comprehensive Regional Water Management Plan being conducted by the Carson Water Subconservancy District. *(Edwin James)*

Staff Summary: Edwin James, General Manager for the Carson Water Subconservancy District will discuss the Comprehensive Regional Water Management Plan including changes in stream flow patterns on the Carson River, the water conservation pilot projects and additional work planned for the next year.

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: No Action

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

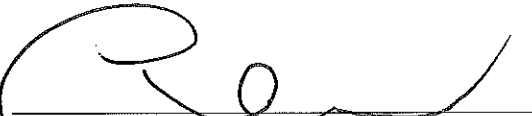
Funding Source: N/A

Alternatives: N/A

Supporting Material: Presentation materials

Prepared By: Janet Busse, Office Supervisor

Reviewed By:


(City Manager)

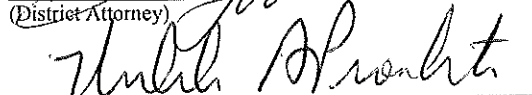
Date:

5/24/11


(District Attorney)

Date:

5/24/11


(Finance Director)

Date:

5/24/11

Board Action Taken:

Motion: _____

1) _____

Aye/Nay

2) _____

(Vote Recorded By)

BACKGROUND:

In 2010, Carson Water Subconservancy District received a grant from Bureau of Reclamation to conduct a Comprehensive Regional Water Management Plan for the Carson River Watershed. The goal of the project is to compare the future water demands to the water supply on a regional basis. As part of the grant requirements, CWSD has developed a regional water conservation plan and is evaluating the feasibility of developing water marketing and water leasing programs. Edwin James, General Manager of CWSD, will present the District's efforts to date on the Comprehensive Regional Water Management Plan.

COMPREHENSIVE REGIONAL WATER MANAGEMENT PLAN

Presented

By

Edwin James

Carson Water Subconservancy District

CARSON WATER

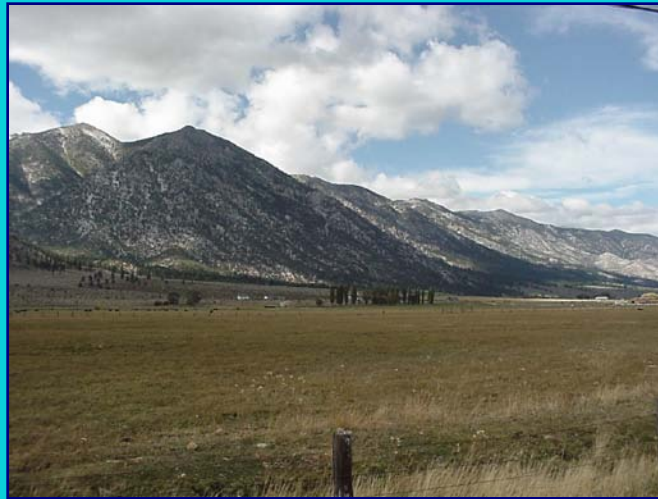


SUBCONSERVANCY
DISTRICT

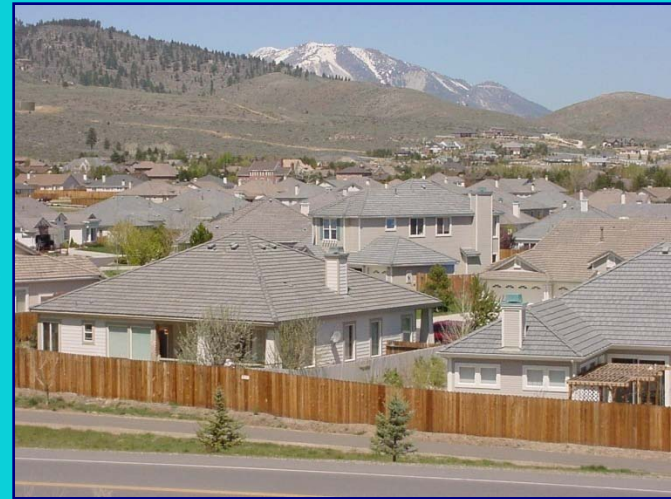
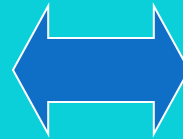
BALANCING WATER DEMANDS



Environmental



Agricultural



Domestic



Overview

BOR Grant

- Evaluate Future Water Supplies & Demands

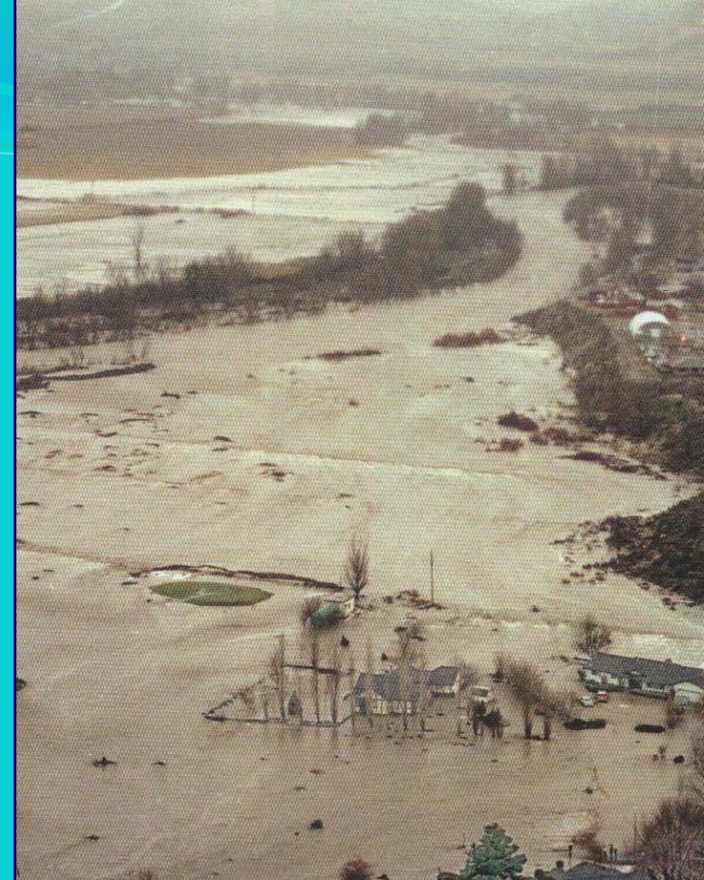
Grant Requirements

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

Two Year Project

FIRST YEAR

Runoff Pattern Changes



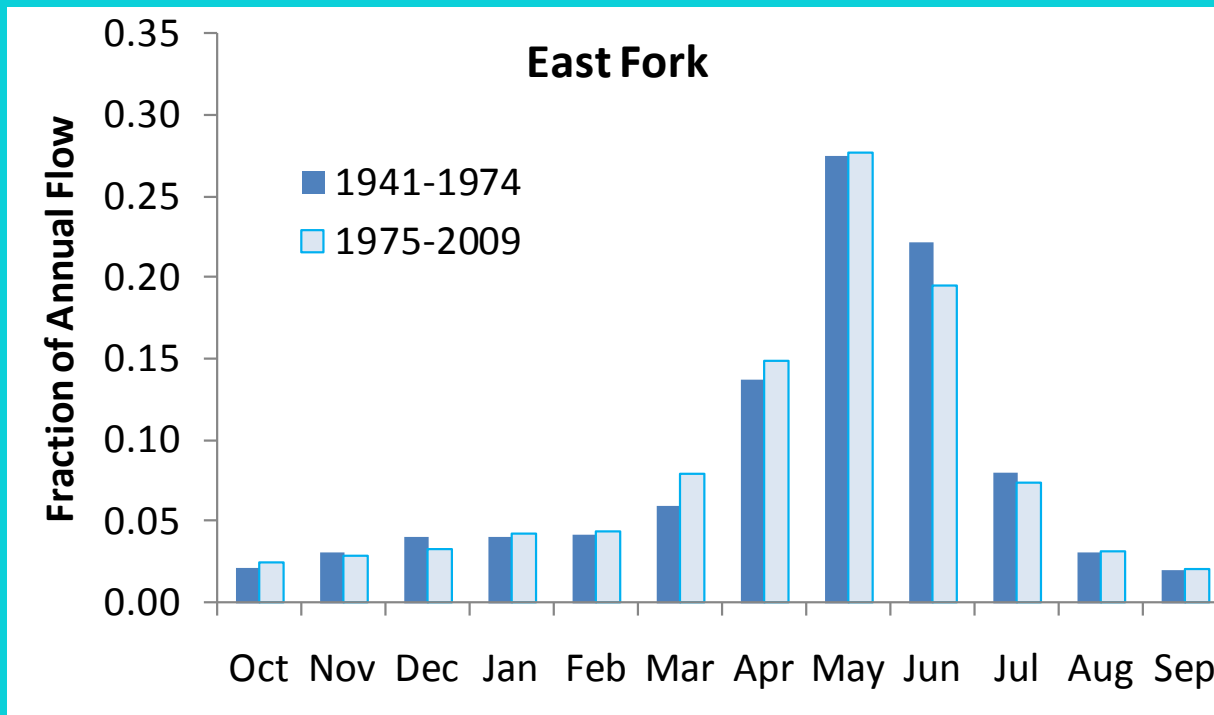
Water Conservation Pilot Projects



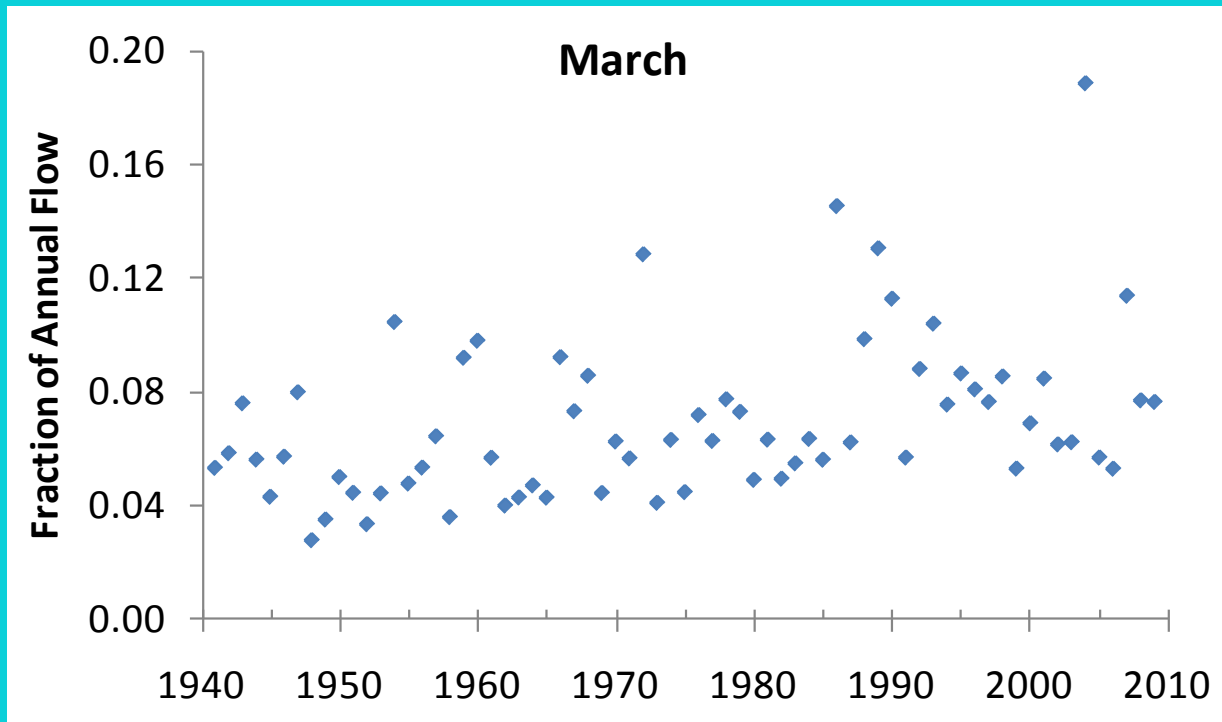
RUNOFF PATTERN CHANGES



Monthly Streamflow – East Fork



Monthly Streamflow – East Fork

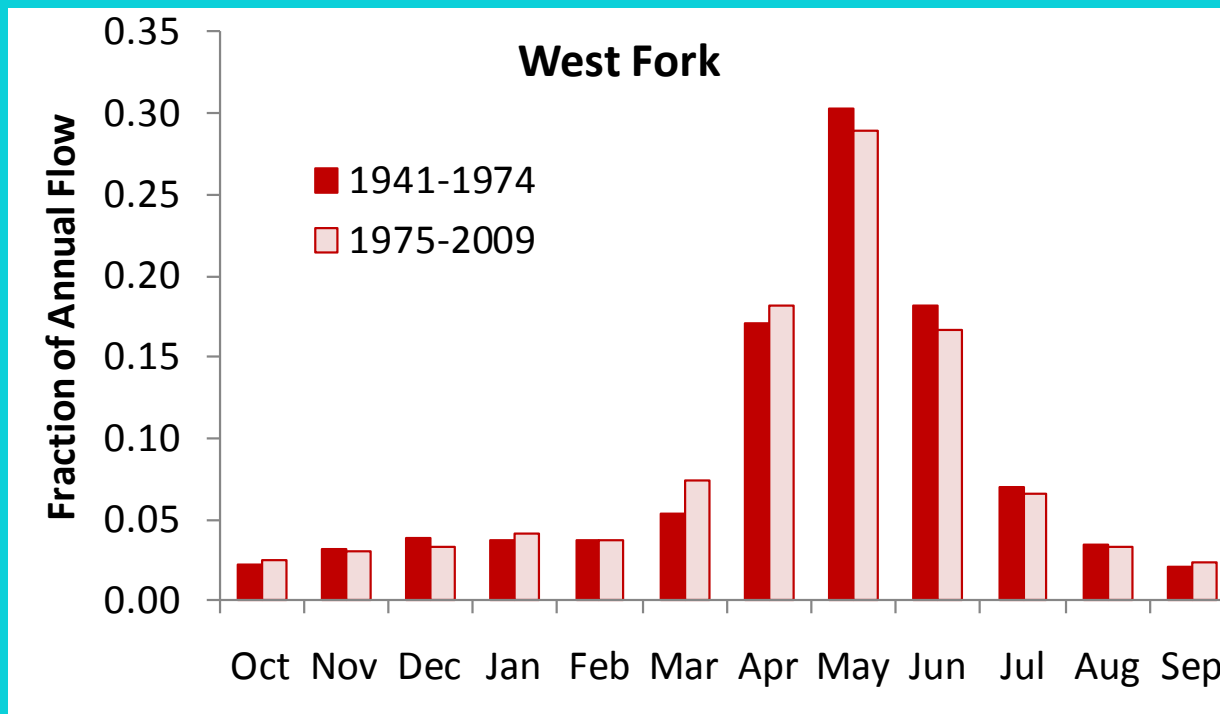


• March ↑

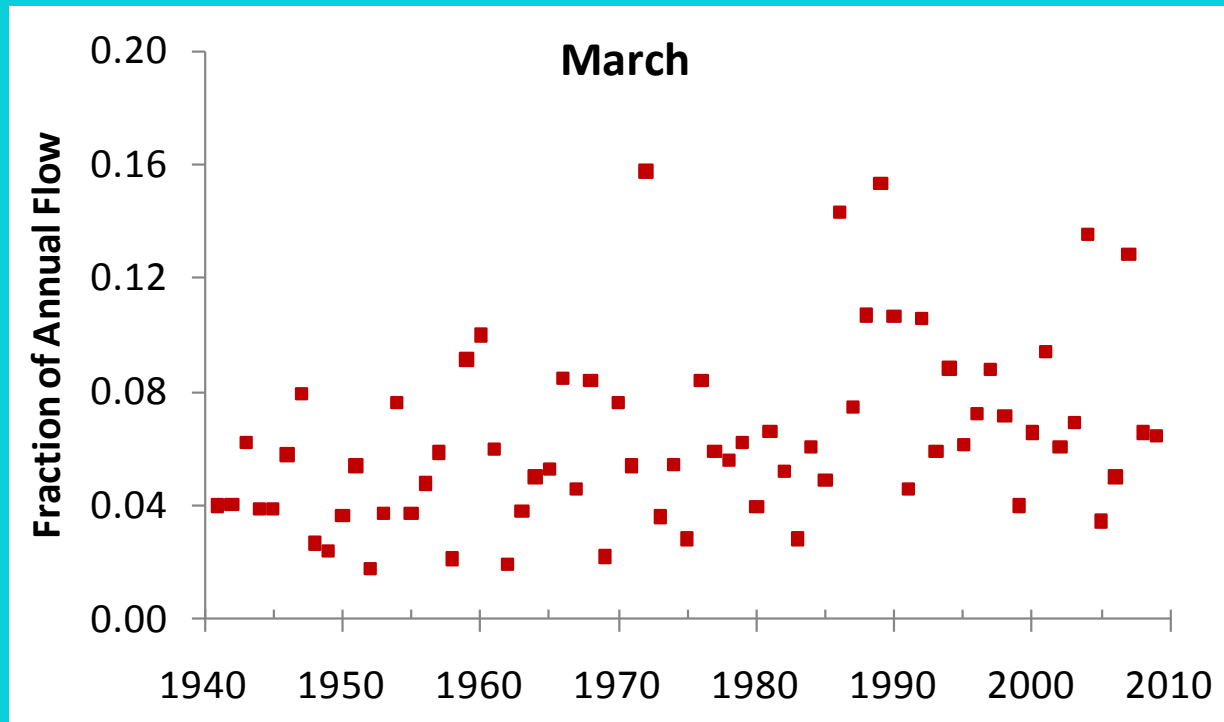
June ↓

July ↓

Monthly Streamflow – West Fork



Monthly Streamflow – West Fork



• March ↑

July ↓

August ↓

Temperature

Twin Lakes Minimum Temperature

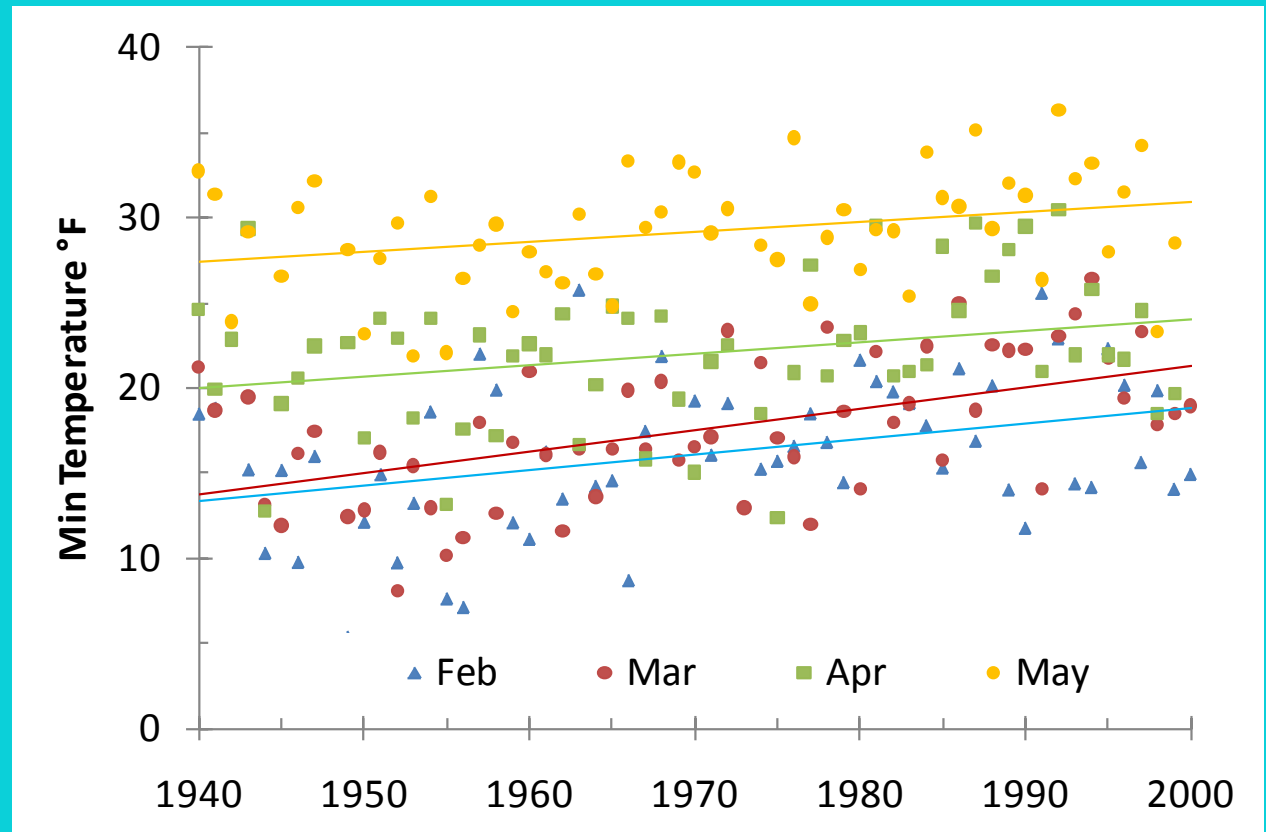
May

April

February

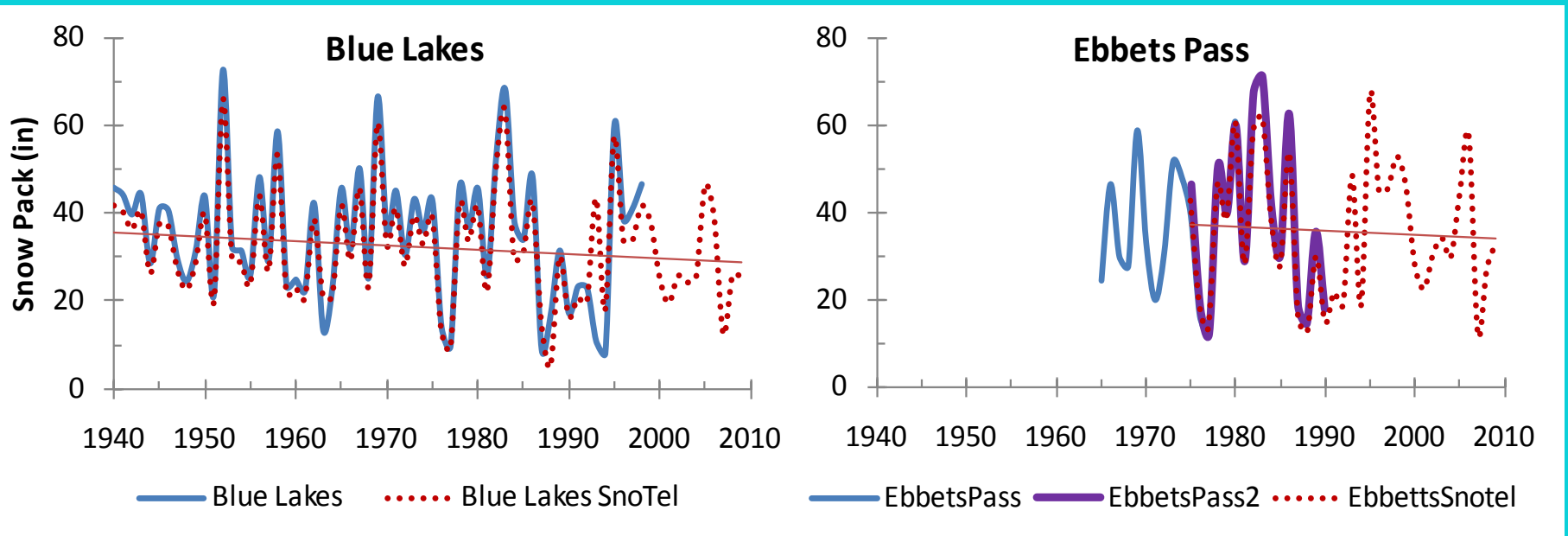
March

Annual

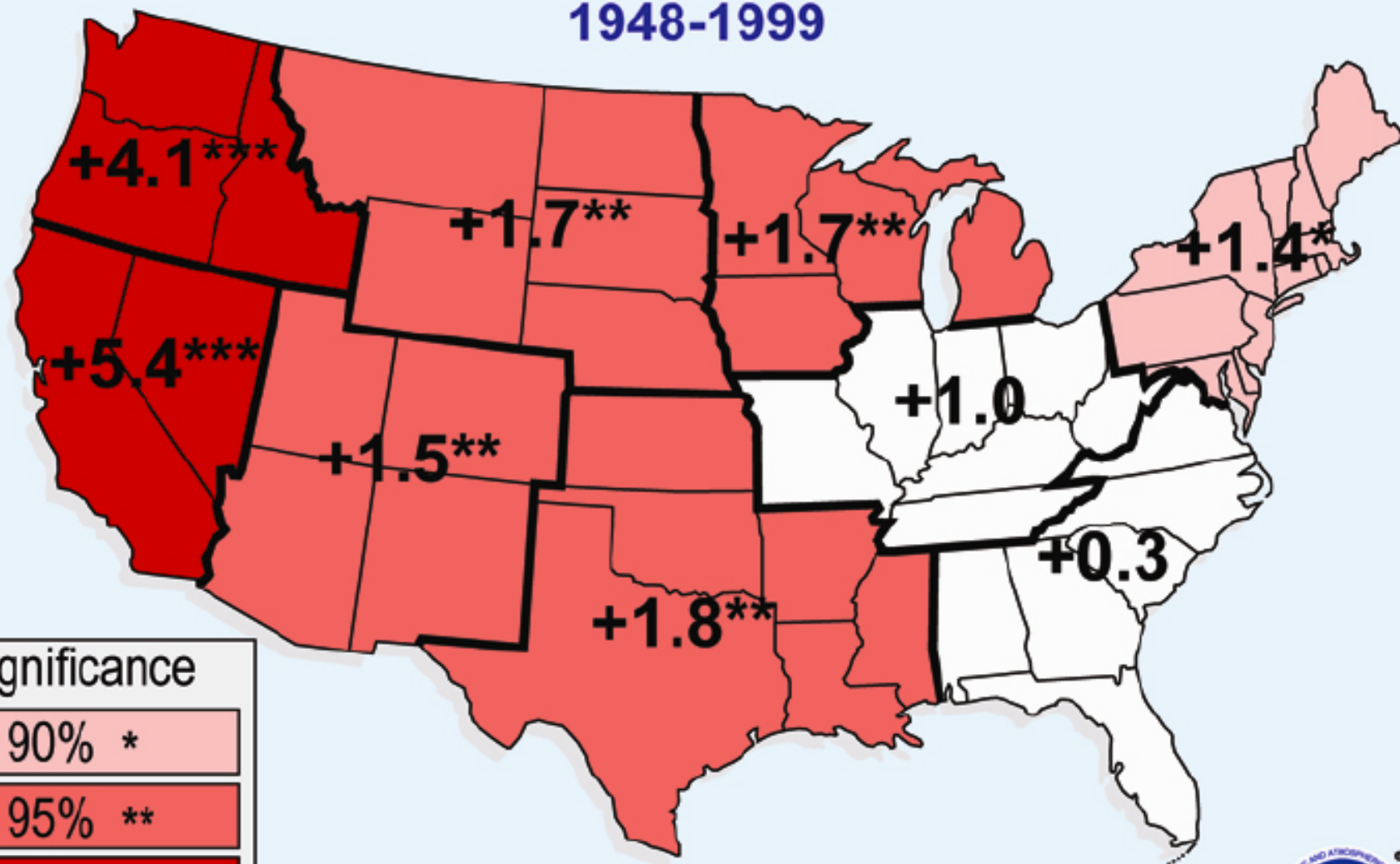


Statistically significant

Snow Pack Over Time



CHANGE IN FROST-FREE SEASON LENGTH DAYS PER DECADE 1948-1999



Significance

> 90% *

> 95% **

> 99% ***

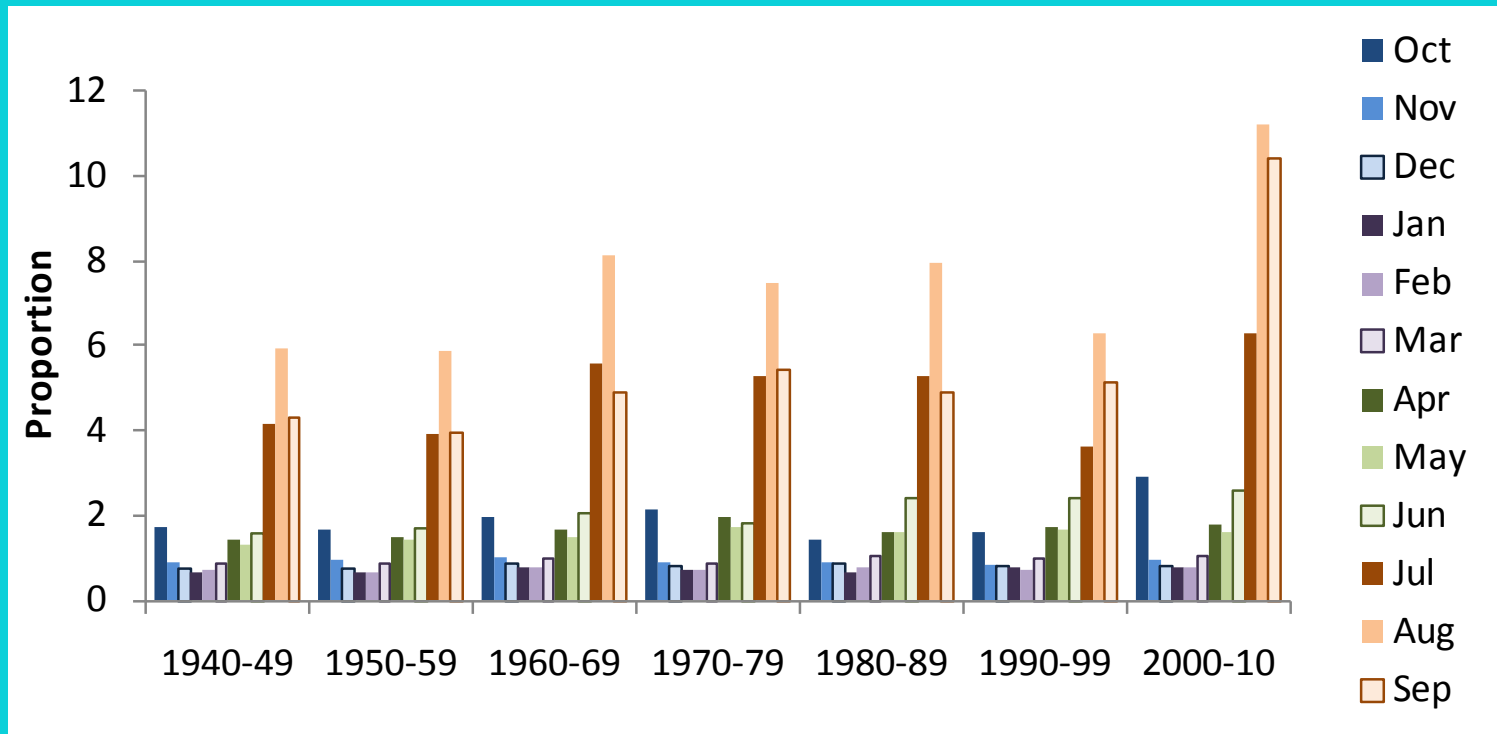
Not Significant

All U.S. = +2.0***



Relationship Between Gauges

West Fork & East Fork / Carson



Water Conservation Pilot Programs:



Goal is to provide suggestions to the various water purveyors on water conservation programs they may want to implement and provide a consistent message throughout the watershed.

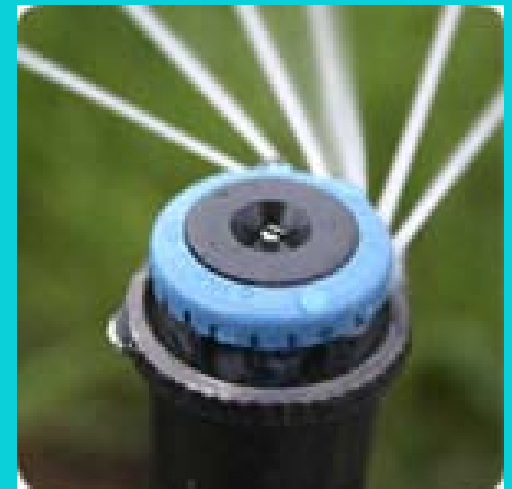
Objectives

- 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.



Regional Water Conservation Program

- **Pilot Projects**
 - Landscape Surveys
 - Large Landscape Audits
 - ET Controllers
 - Education and Outreach
 - Minden Old Court House demonstration project
 - Lyon County demonstration project



Residential Irrigation Survey

- Residential users
- Referred by water purveyors
- Identifies methods to reduce waste and conserve irrigation water
- Provide water saving tips
- Questionnaire



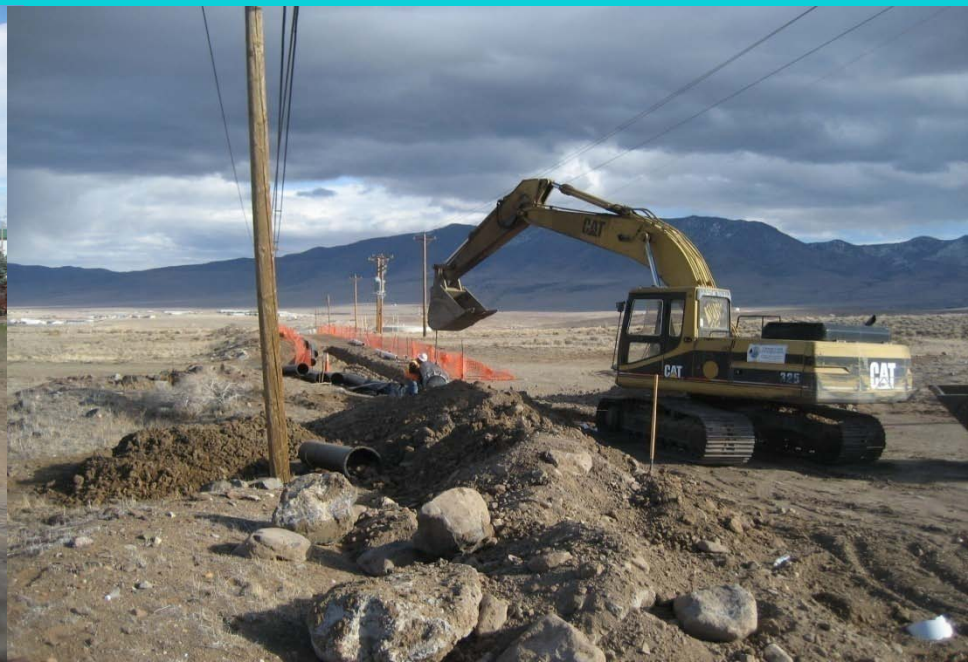
Potential Water Conservation Suggestions

- Meter all residential water users
- Set a preferred irrigation period
- Provide education and outreach programs
- Promote smart water use
- Provide funding incentives (grants)



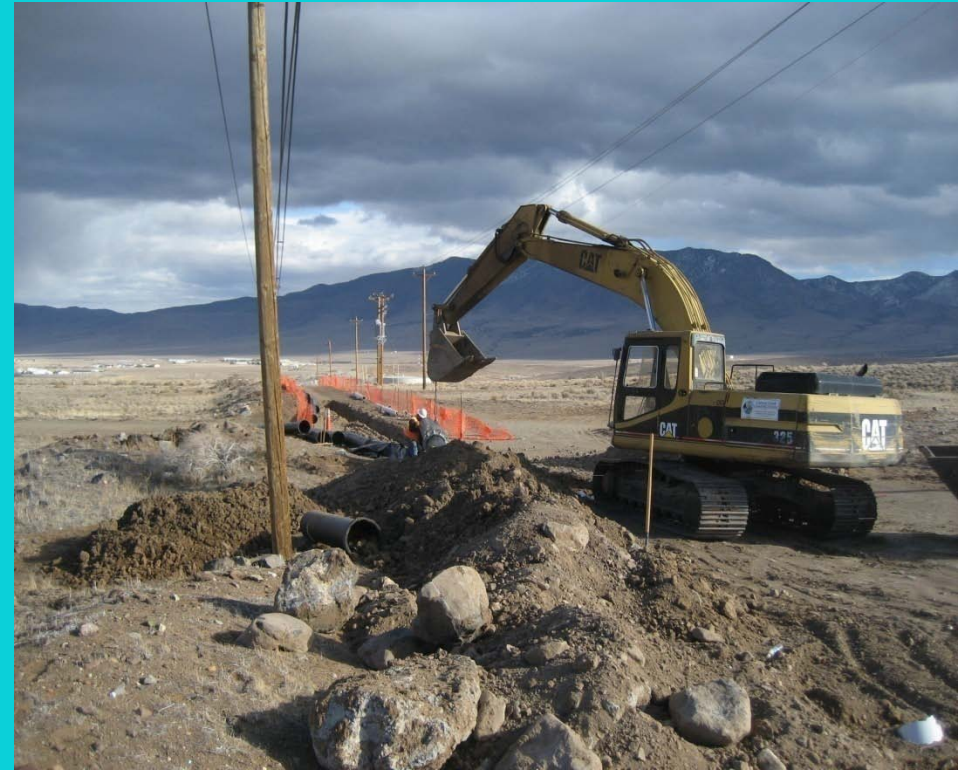
SECOND YEAR

- Continue water conservation pilot program
- Gather groundwater data by basin
- Gather each Water Purveyor's Water Master Plan
- Compare future water demands vs supplies
- Evaluate regional water projects
 - Focus on avoidance costs



How can the Comprehensive Regional Water Management Plan Be used?

- It can be a resource.
- It can provide suggestions on water resource alternatives.
- It can show proposed future regional pipeline and/or interties



QUESTIONS



**For more
information
www.cwsd.org**

775-887-7450