

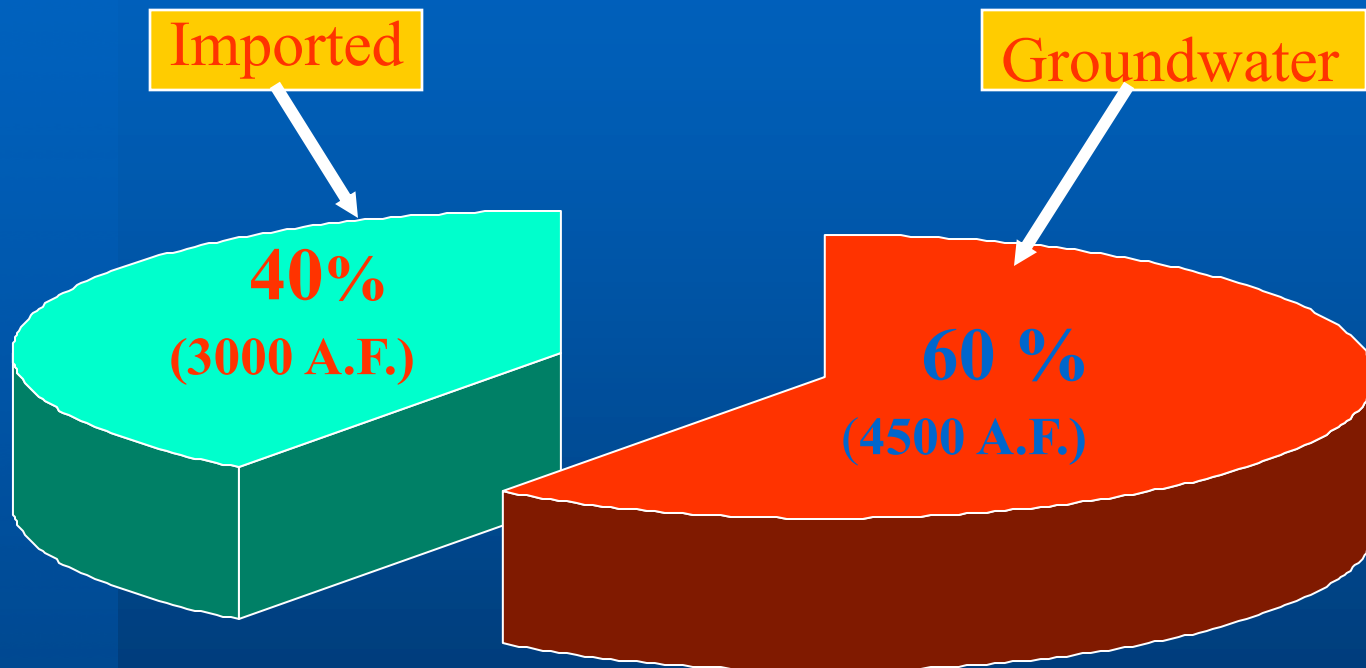
# Well Head Treatment Project

## Water Well 13

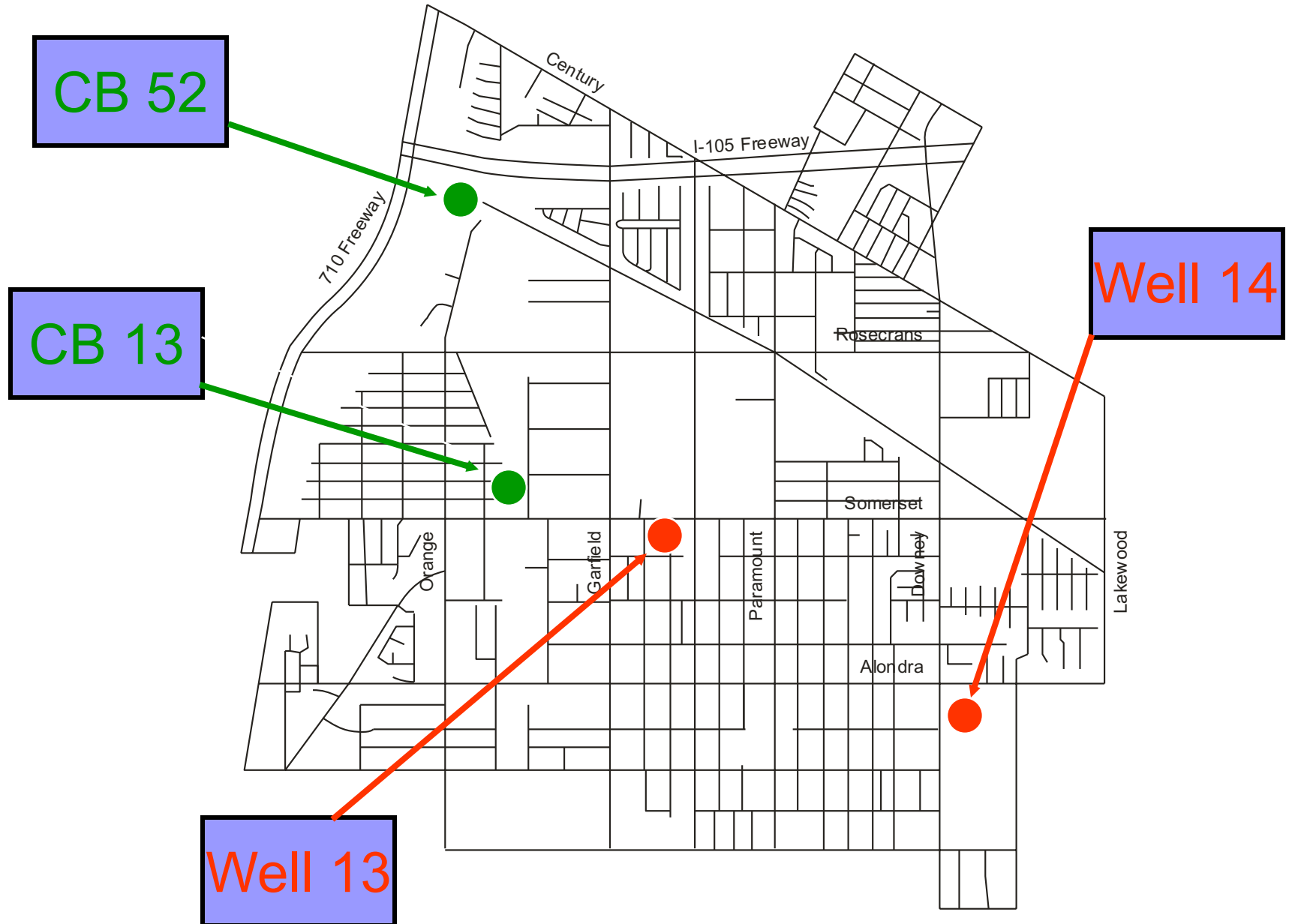
This PowerPoint was originally presented to City Council in 2003.

# Our Water System

**Average Annual Total Water Consumption--7500 A.F.**



# City of Paramount Water Production Sites



# CB 13 and 52

- **CB 13-Located at the end of San Marcus Street.**
- **CB 52 at the north end of Orange Avenue**
- **Connection to MWD**
- **Meets 30-40% of production need**



# Well 14

- **Located:**
  - Behind Alondra School
- **Built in 1984**
- **Produces approx. 1/3 of the City's total water demand**



# Well 13

- **Located:**
  - 15123 Vermont Avenue
- **Built in 1978**
- **Produces approx. 1/4 City production need.**



# Water System Testing

- Testing is state regulated.
- Test for various minerals and chemical content.
- Each item has a “Maximum Contaminate Level” or MCL.
- Non-compliance may require water treatment or shut down of well site.





# CITY OF PARAMOUNT 2002 WATER CONSUMER CONFIDENCE REPORT

	Groundwater		Surface Water		Primary	MCLG or PHG	
	Average	Range	Average	Range	MCL		
<b>Arsenic</b>	10	5-15	ND	ND-2.0	50	-	Erosion of natural deposits, glass
<b>Manganese</b>	48	ND-100	ND	ND	50	-	Erosion of natural deposits

# Water Quality Compliance

- Manganese is naturally found in drinking water.
- Manganese has no adverse health affect.
- Manganese can cause discolored water and damage water mains.

# Cast Iron Main and Manganese



# Manganese Compliance /Well 13

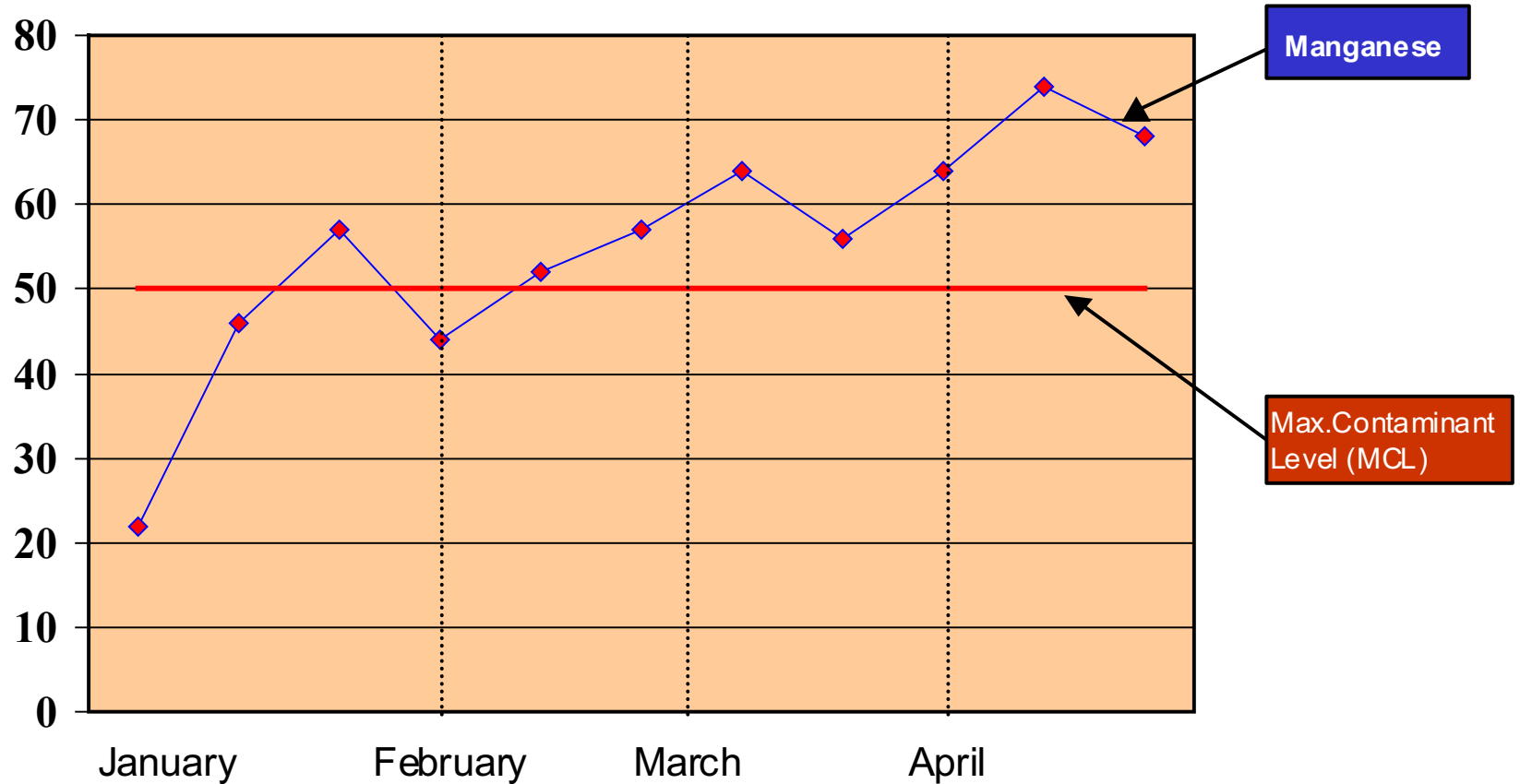
- Manganese MCL:
  - 50 parts per billion
- Well 13 Manganese level:
  - Exceeding 50 parts per billion
- 1994-1997-Manganese level:
  - averaged 80 parts per billion

# Manganese Compliance/Well 13

- **1998-City issued Compliance Order by Department of Health Services (DHS) to reduce Manganese.**
- **City agrees to twice monthly monitoring.**
- **August, 2002-City ends monitoring.**
  - **Manganese level drops just below MCL.**
- **January, 2003-Manganese levels begin to rise again.**

# Manganese Sample History-Well 13

January to April, 2003



# Arsenic

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- **Arsenic is a chemical constituent of water that appears naturally.**
- **High levels of Arsenic can cause health issues.**
- **Arsenic, like Manganese, has a “Maximum Contaminant Level”**

# Arsenic Levels

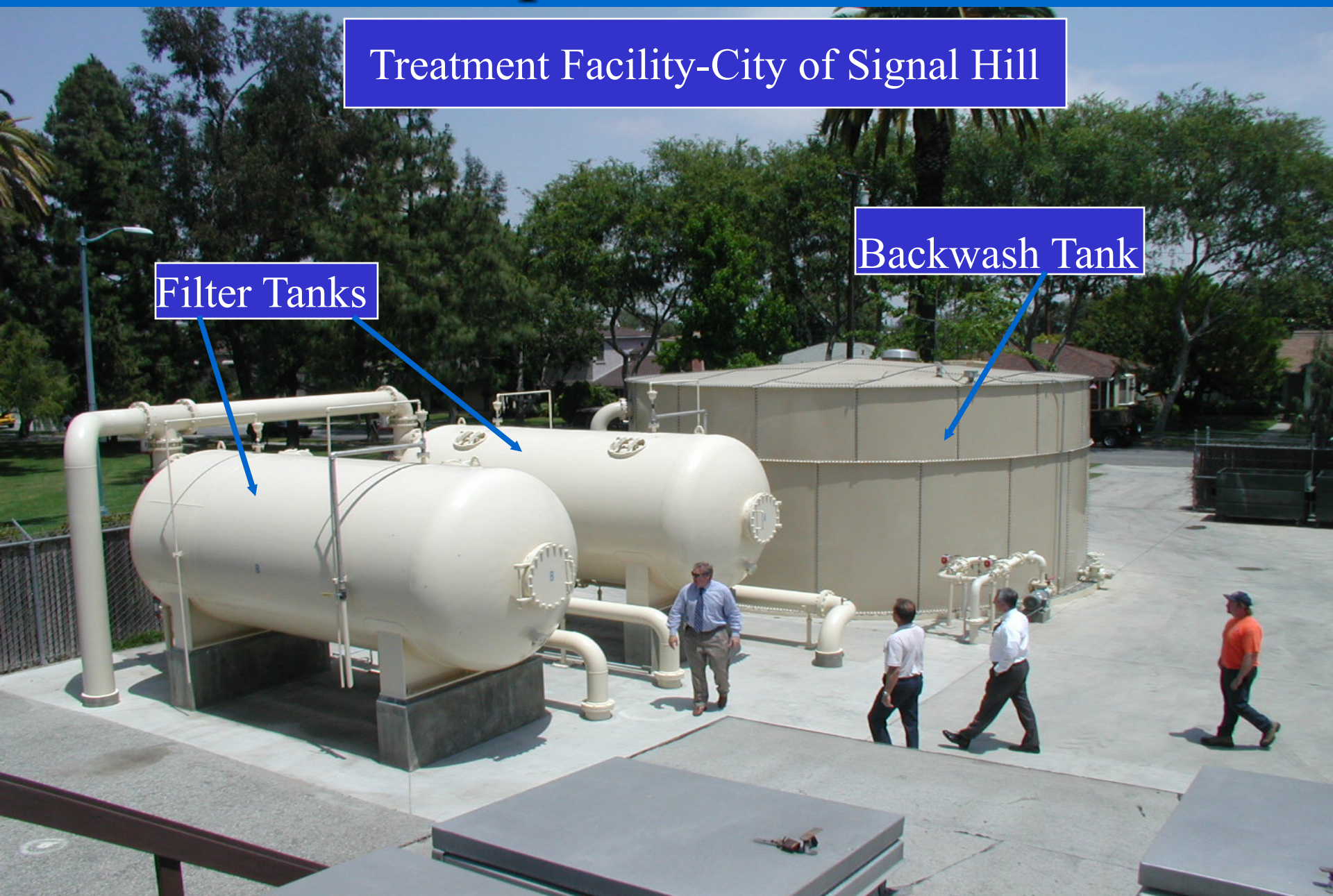
- **Current State MCL:**
  - 50 parts per billion.
- **New Federal MCL:**
  - 10 parts per billion effective January, 2006.
- **Proposed State MCL:**
  - .004 ug/l (or 4 parts per trillion) by 2004.
- **Well 13 Arsenic level-10 parts per billion**
- **Will not meet proposed state regulation.**

# Treatment Options

Treatment Facility-City of Signal Hill

Filter Tanks

Backwash Tank



# Ground Water/Distribution System Water Quality Assessment



- Historical System Analysis
- Water Quality Assessment
  - ⇒ Ground Water
  - ⇒ Distribution System
- Corrositivity Analysis
- Treatment Options

## Operational Recommendations

- *Well Operations*
- *Corrosion Control*
- *Rigorous System Flushing*

## Water Treatment Recommendations



## Water Treatment Facility

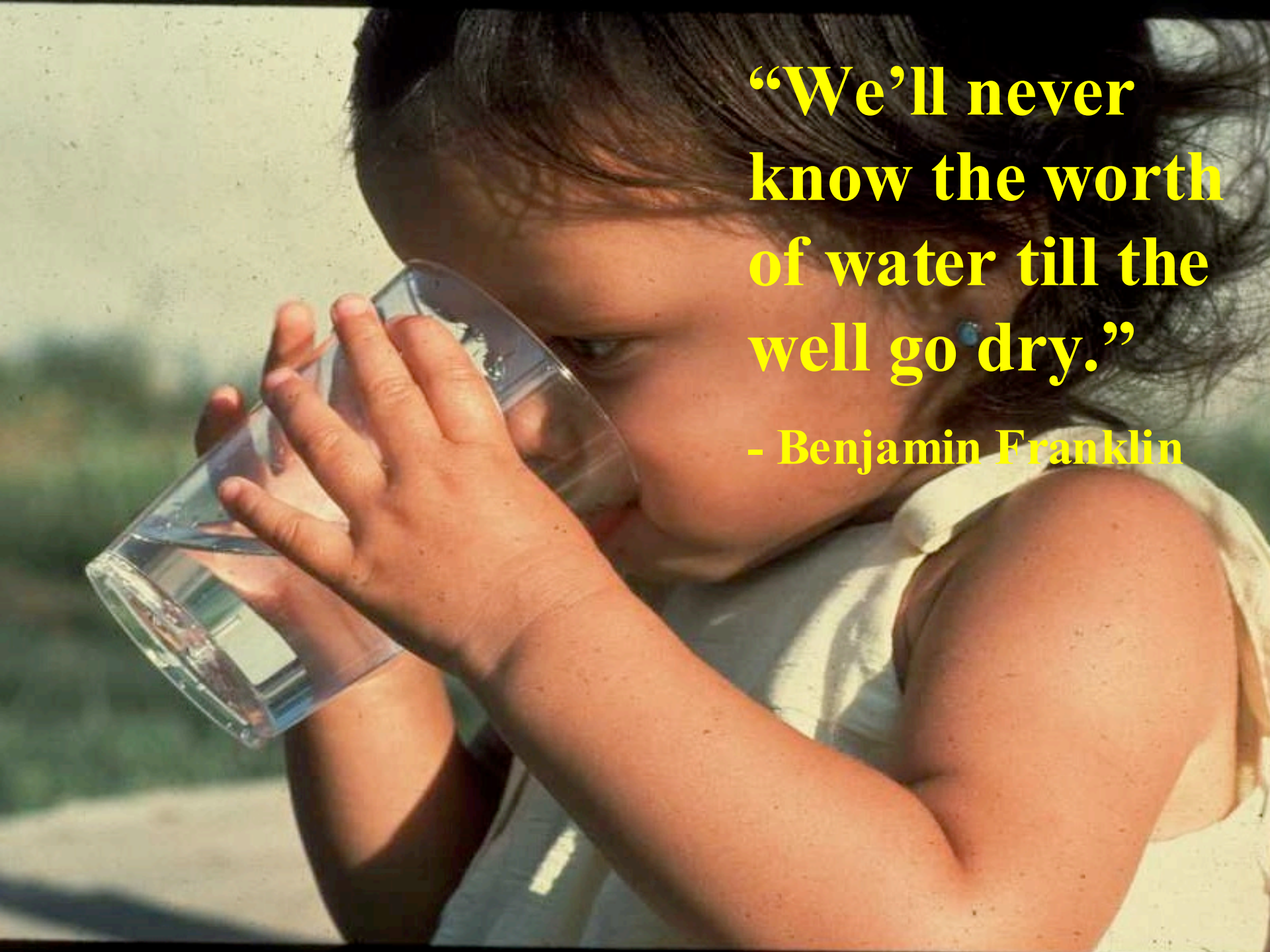
- *Permitting*
- *Design Development*
- *Construction*

# Cost and Financing Options

- **Study and Treatment Cost:**
  - approximately \$1,000,000
- **Financing Options:**
  - ❑ WRD:No interest loan
  - ❑ State Drinking Water Revolving Fund:  
Low interest loan
  - ❑ Water Fund

# Water Rates

- Considering 5% increase (effective January, 2004)
- Last Increase: January, 2002
- 3rd lowest rate among 14 surrounding water agencies.
- Average residential increase:
  - \$2.36 every two months

A close-up photograph of a young child with dark hair, wearing a light-colored shirt, drinking water from a clear plastic cup. The child's face is partially visible, and their hands are holding the cup. The background is a blurred outdoor setting with greenery and a light-colored wall.

**“We’ll never  
know the worth  
of water till the  
well go dry.”**

**- Benjamin Franklin**

# Well Head Treatment Project

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## **Water Well 13**