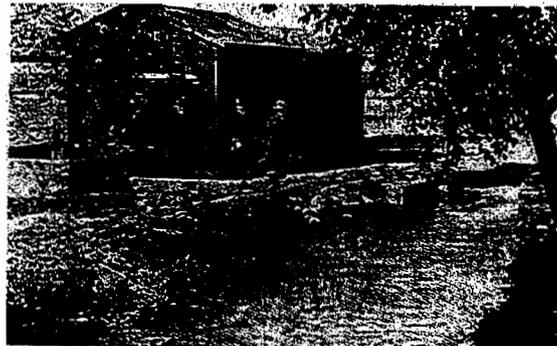


**City of Mesa
Water Resources Department
2010 Update**

1

100 Years of Community Service



First water bond 1910

2

Water Resources Department

Water Program

- Respond to customers' needs
- Ensure sustainable supplies
- Treat supplies
- Ensure quality of water in distribution system
- Ensure working distribution system and move water to meet demand
- Meter and deliver water

3

System Value

Water System

- 2 plants, 39 wells, 20 pump stations, 18 reservoirs, 2,300 miles of pipe
- \$2.354 billion in replacement value

4

Council Strategic Initiatives

- **Economic Development**
 - Provide a reliable, reasonably priced water supply for municipal, commercial, and industrial needs
 - Solid 100-year assured water supply means fewer hassles for developers than in other communities
- **Community Engagement**
 - Daily interaction through utility service turn on/turn off
 - Daily interaction responding to customers' needs
- **Quality of life**
 - Sustainable reliance on renewable water resources
 - Protection of public health with clean drinking water

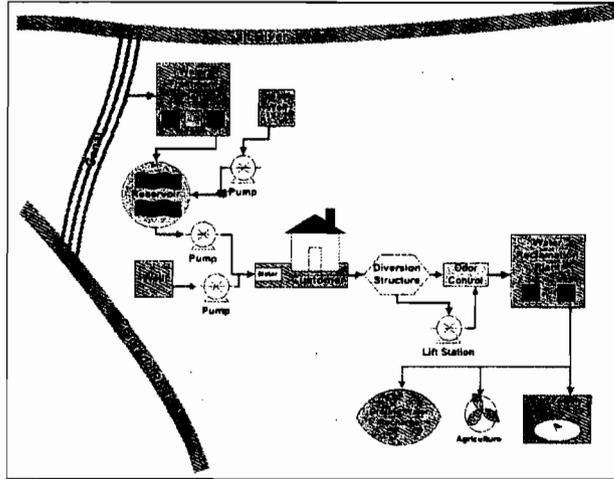
5

Council Strategic Initiatives

- **Regional Leadership**
 - East Valley Water Forum
 - Val Vista Water Treatment Plant
 - MAG water quality committee
 - Brown Road Water Treatment Plant
 - ASU
 - Indian water rights settlements
 - Colorado River Advisory Committee
- **Financial Stability**

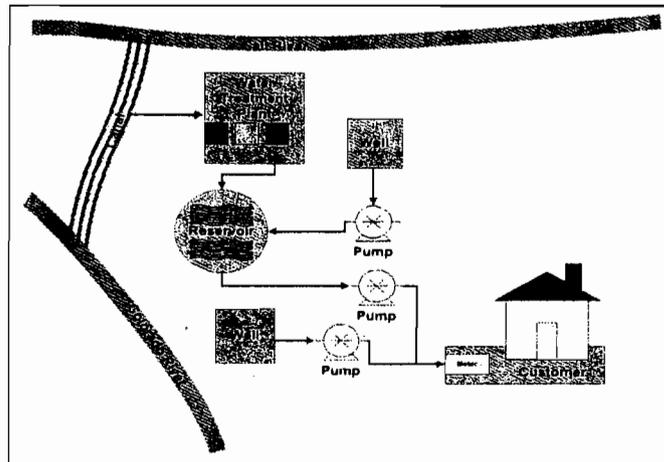
6

What We Do:



7

Today's Focus



8

Water Resources Department

Water Program:

- **Respond to customers' needs**
- **Ensure sustainable supplies**
- **Treat supplies**
- **Ensure quality of water in distribution system**
- **Ensure working distribution system and move water to meet demand**
- **Meter and deliver water**

9

Respond to Customers' Needs

- **135,000 accounts**
- **120,000+ requests to turn on/turn off utilities**
- **Pressure concerns**
- **Water quality concerns**
- **Leaks**
- **Irrigation in City center**
- **Bees & roaches**
- **Odor concerns**
- **Problem investigation**

10

Ensure Sustainable Supplies

- **Currently use around 100,000 AFY total**
 - On Project usage 48,000 AFY
 - Off Project usage 52,000 AFY
 - Serve 155 square miles and 500,000 people
- **Plan for buildout use of 155,000 AFY**
 - On Project usage 55,000 AFY (15%↑)
 - Off Project usage 100,000 AFY (92% ↑)
 - Serve 155 square miles and 580,000 people
 - 2040

13

Ensure Sustainable Supplies

On Project

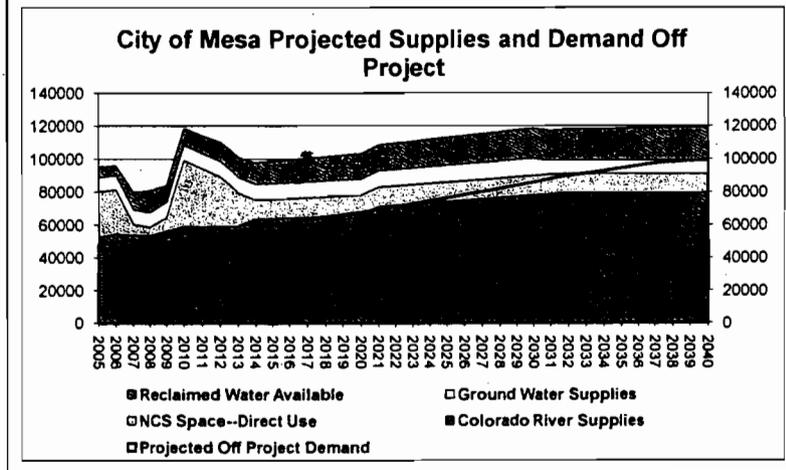
- Extensive water rights from Salt/Verde River system
- Groundwater

Off Project

- Leases, federal allocations, other water from the Colorado River
- New Conservation Space water from Roosevelt Dam
- Gila River Indian Community exchange water
- Groundwater
- Banked surface water – reclaimed and CAP water
- Reclaimed water – direct use

14

Ensure Sustainable Supplies



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Ensure Sustainable Supplies

Build redundancy for:

- Drought/climate change
- Infrastructure constraints
- Changes in regional, state, and federal policies
- Contingency for future demands

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Water Resources Department

Water Program:

- Respond to customers' needs
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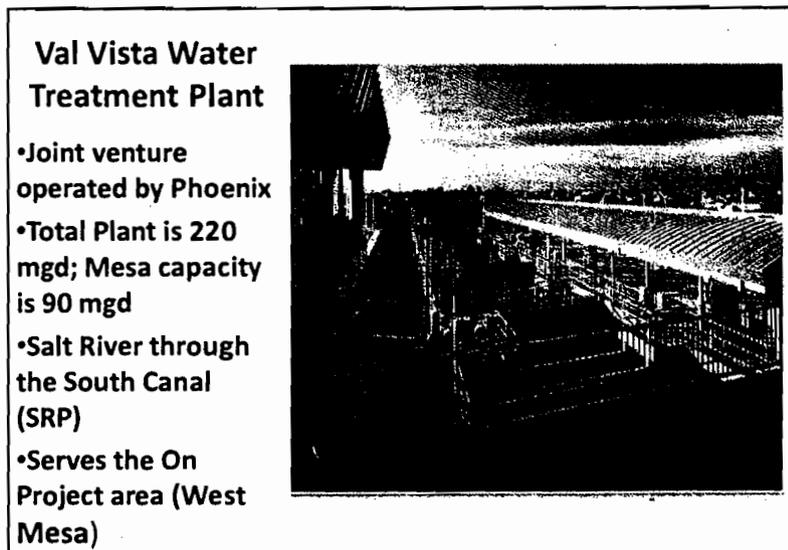
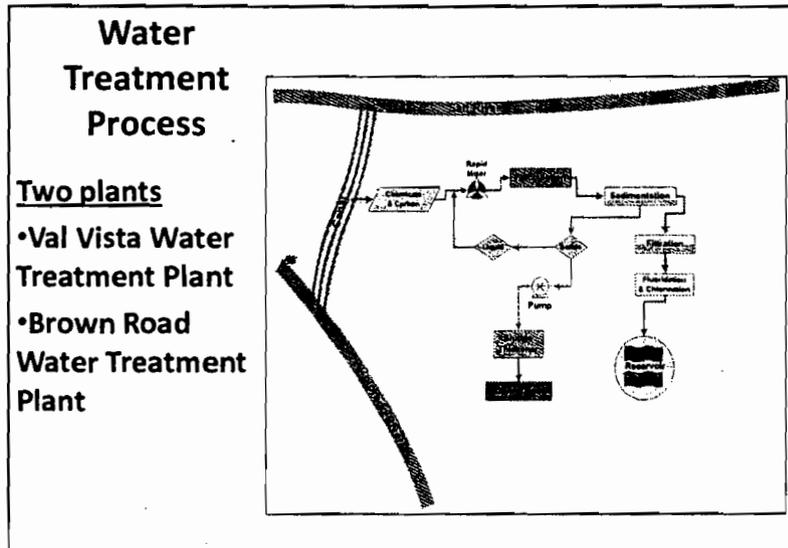
Treat Supplies

Protect public health

- Surface water treatment plants
- Wells

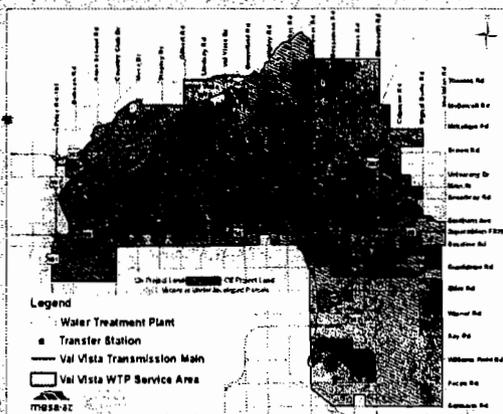


18



Val Vista Water Treatment Plant

- Construction started in 1975
- Lifecycle replacement of components
- Modifications to meet increased regulatory compliance
- Modifications to meet changing source water quality



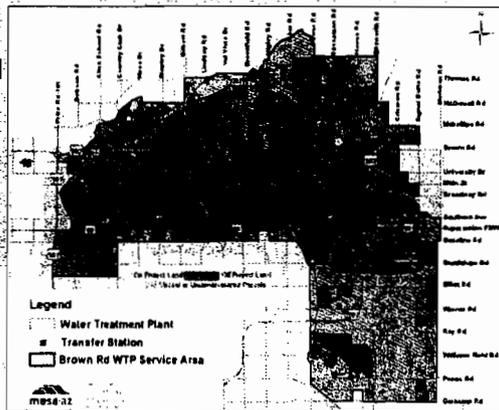
Brown Road Water Treatment Plant

- Mesa owned and operated
- 72 mgd capacity
- Colorado River through the CAP canal
- Serves the Off Project area (Northeast Mesa)



Brown Road Water Treatment Plant

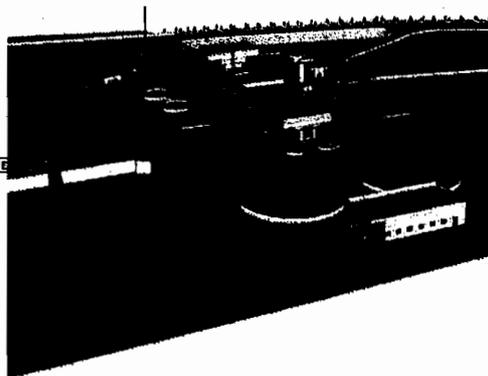
- Became operational in 1985
- Lifecycle replacement of components
- Modifications to meet increased regulatory compliance



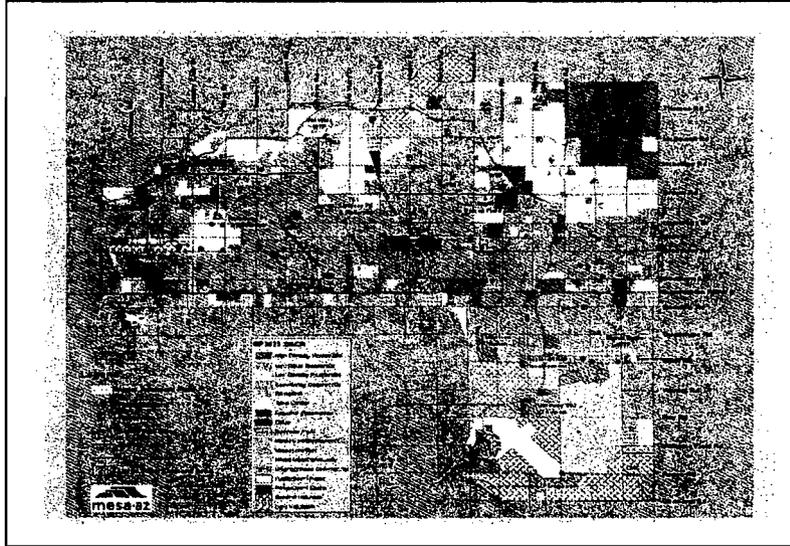
23

Signal Butte Water Treatment Plant

- Would be Mesa owned and operated
- 30 mgd capacity
- Colorado River through CAP Canal
- Would serve the Off Project area (Southeast Mesa)



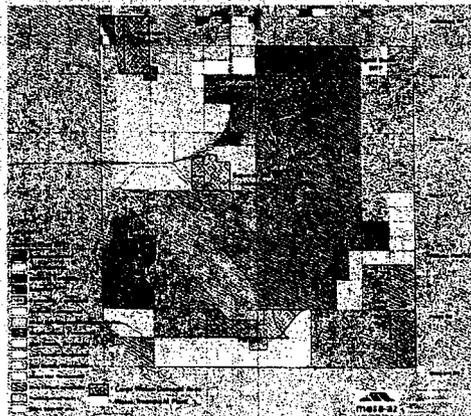
24



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Large Water Demand Areas

- Industrial zoning means large single points of demand in Southeast Mesa
- Without Signal Butte Plant, difficult to push enough water where it needs to go
- Also provides redundancy for northeast Mesa



28

Treat Supplies

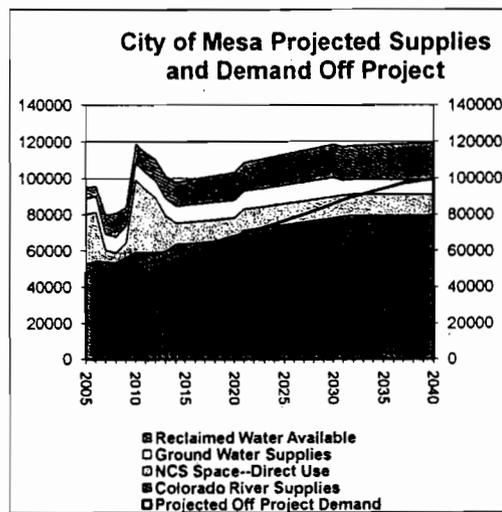
Wells and well equipment

- **Component of supply**
 - Groundwater
 - Banked surface water
- **Reliability for planned and unplanned outages**
 - Canals & treatment plants
 - Annual SRP South canal outage
 - CAP canal outage in 2015
 - Pipeline failures
 - Drought
- **Localized pressure improvement**
 - Southeast Mesa

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Well Dependency

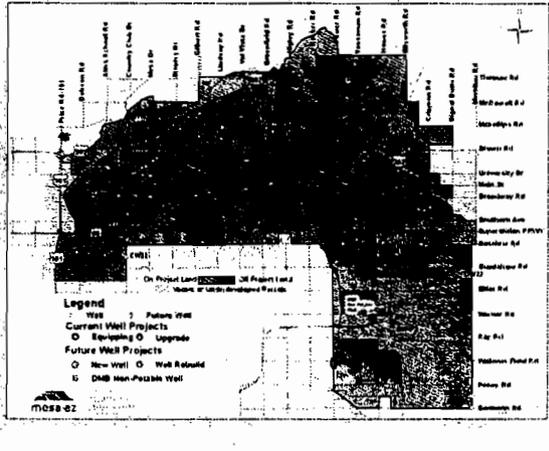
- Will not have enough surface water to meet demands through treatment plants alone
- Wells provide redundancy for times surface water is unavailable
- 39 operational wells
- 14 more needed for buildout



30

Wells and Well Equipment

- West Mesa wells provide redundancy during annual SRP canal dry up
- East Mesa wells provide improved pressures and redundancy during CAP outages



Water Resources Department

Water Program:

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- Ensure working distribution system and move water to meet demand
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Ensure Quality of Water in Distribution System

Water quality protection

- **Regulatory compliance**
 - **Permits (AZPDES, Air, Recharge, Storage)**
 - **Sampling and laboratory analysis**
 - **Disinfectant by-product rules**
 - **Monitor upcoming rules**
- **Backflow prevention**

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Water Resources Department

Water Program

- **Respond to customers' needs**
- **Ensure sustainable supplies**
- **Treat supplies**
- **Ensure quality of water in distribution system**
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- **Meter and deliver water**

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Ensure Working Distribution System and Move Water to Meet Demand

Aspects of meeting customer demands:

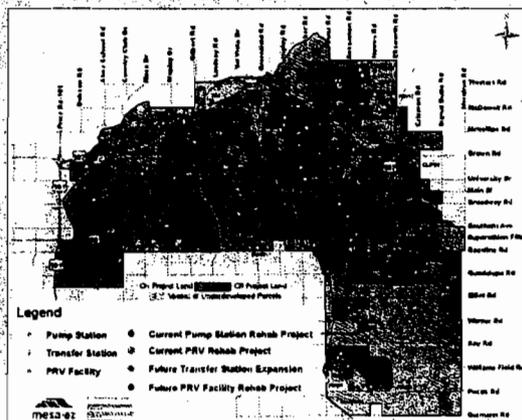
- Location (where customer wants it)
- Volume (how much the customer wants)
- Timing (when customer wants it)
- Pressure (what customer needs it for)
- Reliability (always there when needed)
- Quality (must be safe!)

Pump stations, pressure regulating stations, water lines, valves, fire hydrants, reservoirs

35

Pump Stations & Pressure Regulating Stations

- Move water from On to Off Project, back again
- Move water to upper elevations
- Regulate pressures in Southeast Mesa



36

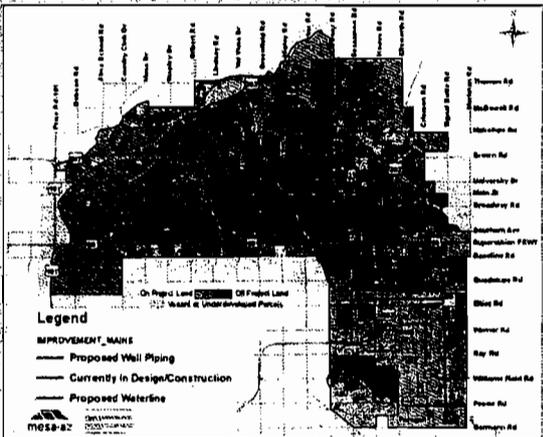
1919-1950 Pipes

- Mostly cast iron
- Targeted because of age, diameter too small for fire flows
- Replaced in sections along with valves and hydrants



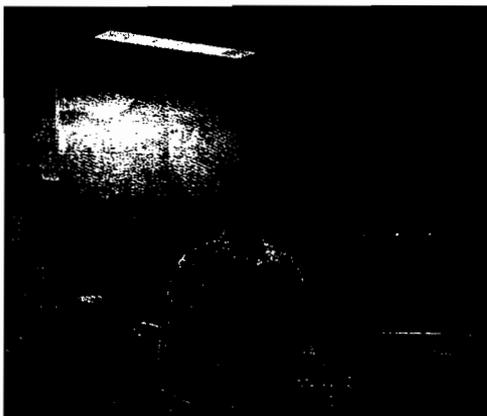
Expansion Pipelines

- Dependent on timing of new development
- Will improve pressures throughout the area



Utilities Control Center

- Control the pumps, pressure stations, reservoirs, and wells that make up the distribution system
- Schedule legal and economic use of water supplies available
- Minimize energy costs
- 24/7 Dispatch for other departments



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Water Resources Department

Water Program:

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Meter & Deliver Water

Residential Meters

- **147,000 + meters**
 - **Backlog of oldest, worst-performing meters caught up by July 2010**
 - **35,000 meters replaced since December 2008**
 - **Thereafter target worst-performers based on:**
 - **Accuracy of make and model based on statistical sampling**
 - **Efficient routing**

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Meter & Deliver Water

Residential Meters

- **Expect nearly \$1M/YR in increased revenue from meter change-out program**
- **Expect decrease in system losses**

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Meter & Deliver Water

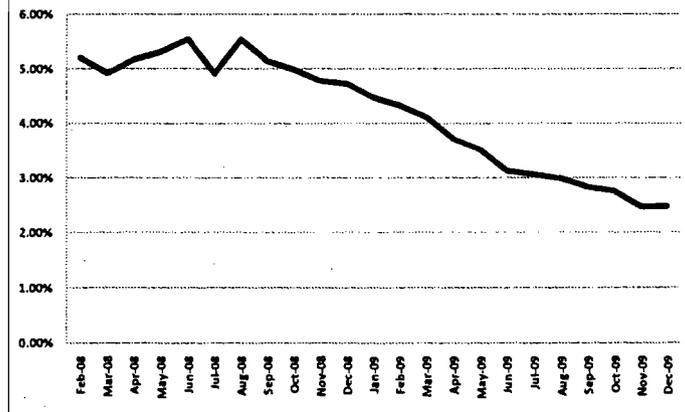
Commercial Meters and Vaults

- 516 large meter sites
- 300 deteriorated
- 30 per year targeted for rehabilitation



45

City of Mesa Water Distribution System Losses



46

System Funding

- **Customer rates**
- **Revenue bonds**

Users of the system pay for the benefit of the system

47

Revenue Bonds Proposed Authorization

2010 Election

48

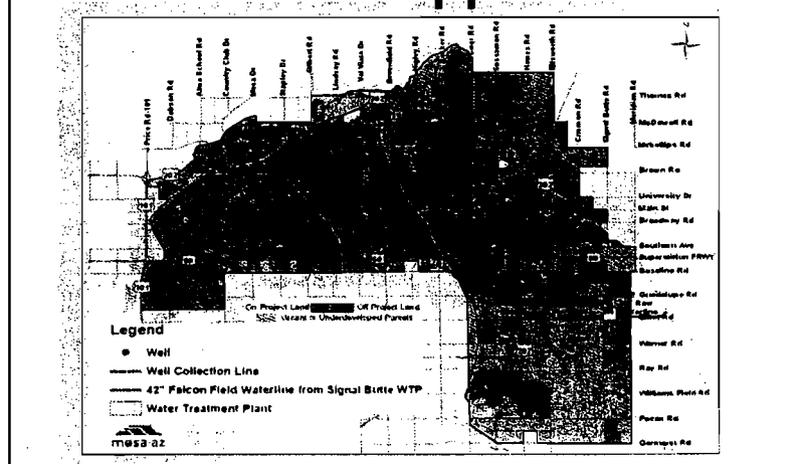
Water Resources Department

Water Program:

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Treat Supplies



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Treat Supplies

- Replace aging facilities at Brown Road WTP

FY 10/11	FY 11/12	FY 12/13	FY 13/14
\$405,000	\$328,000	\$226,000	\$455,000

- Replace aging facilities at Val Vista WTP

FY 10/11	FY 11/12	FY 12/13	FY 13/14
\$0	\$961,676	\$701,606	\$5,352,971

51

Treat Supplies

- Rehabilitate older wells and equipment and provide reliability for 2015 CAP outage

FY 10/11	FY 11/12	FY 12/13	FY 13/14
\$0	\$4,625,764	\$3,215,418	\$1,000,000

- Signal Butte WTP and associated major lines

FY 10/11	FY 11/12	FY 12/13	FY 13/14
\$2,777,250	\$2,777,250		

*WTP and lines = \$110M

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Water Resources Department

Water Program:

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Ensure Quality of Water in Distribution System

- Disinfectant by-product mitigation

FY 10/11	FY 11/12	FY 12/13	FY 13/14
\$0	\$850,000	\$850,000	\$0

- Replace compliance lab equipment

FY 10/11	FY 11/12	FY 12/13	FY 13/14
\$0	\$90,000	\$30,000	\$35,000

54

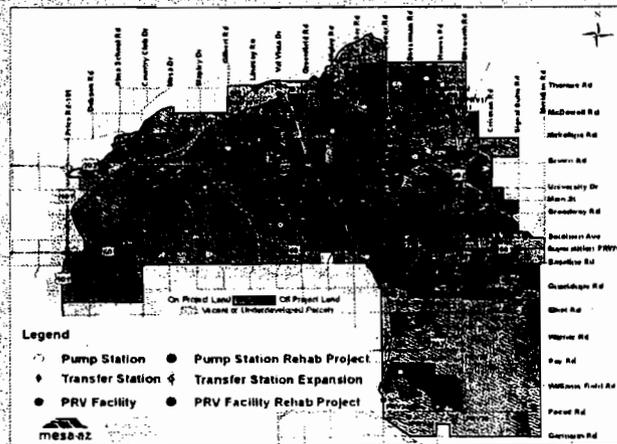
Water Resources Department

Water Program

- Respond to customers' needs
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Pump Stations & Pressure Regulating Stations



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Ensure Working Distribution System and Move Water to Meet Demand

- Replace aging pump and regulating stations and rehabilitate reservoirs

FY 10/11	FY 11/12	FY 12/13	FY 13/14
\$0	\$4,282,000	\$5,362,000	\$5,362,000

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Ensure Working Distribution System and Move Water to Meet Demand

- Replace aging lines, valves, and hydrants, and provide reliability to existing customers

FY 10/11	FY 11/12	FY 12/13	FY 13/14
\$9,420,881	\$13,611,855	\$12,416,139	\$10,231,380

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Ensure Working Distribution System and Move Water to Meet Demand

- Asset management and condition assessments

FY 10/11	FY 11/12	FY 12/13	FY 13/14
\$942,389	\$811,331	\$740,771	\$953,314

- Security enhancements at remote facilities

FY 10/11	FY 11/12	FY 12/13	FY 13/14
\$0	\$500,000	\$500,000	\$500,000

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Water Resources Department

Water Program:

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Meter & Deliver Water

- Continue meter test and replacement program

FY 10/11	FY 11/12	FY 12/13	FY 13/14
\$450,000	\$497,000	\$697,000	\$1,437,000

- Upgrade large meter vaults

FY 10/11	FY 11/12	FY 12/13	FY 13/14
\$105,000	\$805,000	\$805,000	\$805,000

62

Summary

Four-year Capital Needs

- **\$131M in lifecycle replacements and ensuring reliability for existing customers**
 - 5% of system value
- **Continued assessment of capital needs related to growth and system expansion**
 - Third and final water treatment plant

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Summary

Four-year Bond Authorization Proposal

- **\$131M in total four-year capital needs**
- **\$35M in remaining authorization**
- **\$96M requested 4 year authorization**

64

Summary

Bond Authorizations

- 2000 = \$88M
- 2004 = \$69M
- 2006 = \$144M
- 2010 = \$96M Proposed

65



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March 17, 2010

Office of Senator John McCain
241 Russell Senate Office Building
Washington, D.C. 20515

Dear Senator McCain:

We're writing to let you know about the positive benefits the Land and Water Conservation Fund (LWCF) has had for our communities.

LWCF state assistance grants have been a crucial support for state and local park expansions and for developing recreational facilities. Across Arizona these state assistance grants have benefited 726 community parks projects in Arizona providing over \$58 million to match with state and local funds. Here in the Phoenix and Mesa area alone there have been 59 projects totaling \$4,710,250.26. This includes trails, baseball fields, better lighting in parks, heritage parks, and pools.

And while our parks are critical for close to home activities, we also understand the importance of our public lands outside of town that provide us with our scenic views, wildlife habitat and weekend recreation. In just the last five years, LWCF has provided over \$5 million to protect our natural areas.

Investing in these amenities is not only essential to our quality of life here in Arizona, but they help build our economy, and create jobs.

When you add up the impacts of outdoor recreation activities, like biking, camping, hiking, climbing and wildlife viewing among others, we see 82,000 jobs, nearly \$350 million in annual sales tax revenues, and almost \$5 billion in retail sales and services across Arizona. In fact, there are more than 418,000 Arizona resident hunters and anglers, slightly less than the population of our third largest city, that generate \$1.3 billion in direct spending annually. This does not include the economic benefits from the millions of tourists who come to our state to visit every year.

The LWCF was created by Congress in 1965 and is authorized to receive \$900 million annually in federal revenues from oil and gas leasing of the Outer Continental Shelf (OCS). It makes good economic sense to reinvest a small fraction of these federal leasing revenues in permanent natural resource protection.

Unfortunately, the LWCF program has received full funding only once in its history and in recent years has steadily declined to a low in appropriated funding of \$155 million in 2008.

Please review the enclosed materials that highlight some of the projects that have moved forward because of the Land and Water Conservation Fund. These kinds of improvements to our communities are an important part of ensuring our natural, cultural, and recreation heritage.

Sincerely,

Mayor Scott Smith

Vice Mayor Kyle Jones
District 4

Councilmember Dave Richins
District 1

Councilmember Alex Finter
District 2

Councilmember Dennis Kavanaugh
District 3

Councilmember Dina Higgins
District 5

Councilmember Scott Somers
District 6

March 17, 2010

Office of Congressman Jeff Flake
240 Cannon House Office Building
Washington, D.C. 20515

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