

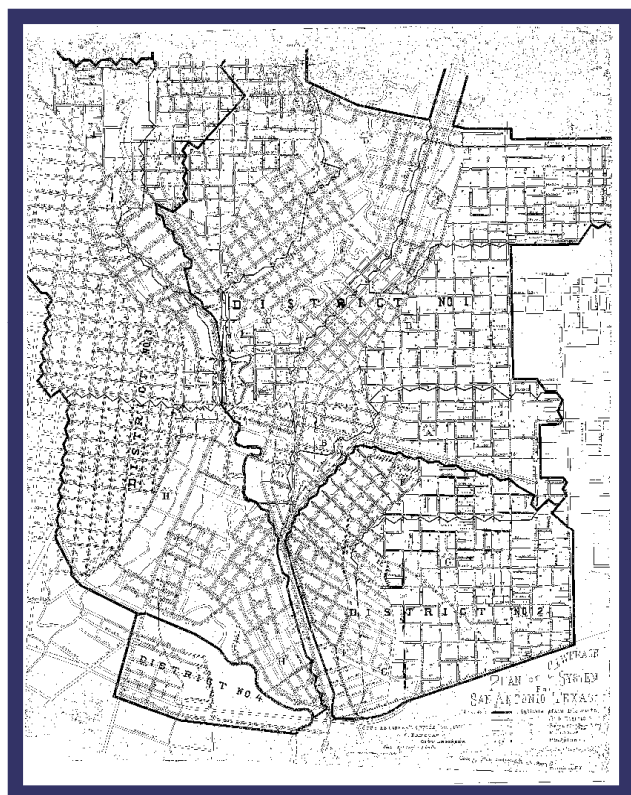


Updated Master Plan for Water Recycling Centers

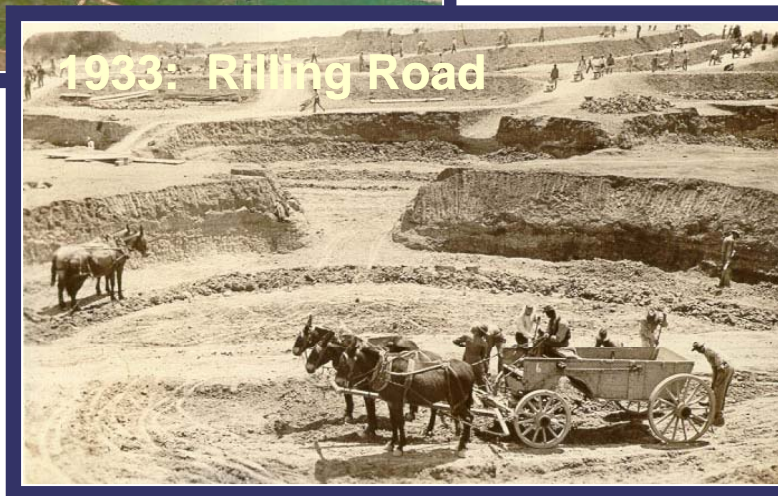
June 30, 2010

Steve Clouse
Chief Operating Officer

Historic sewerage systems



1894 collection system

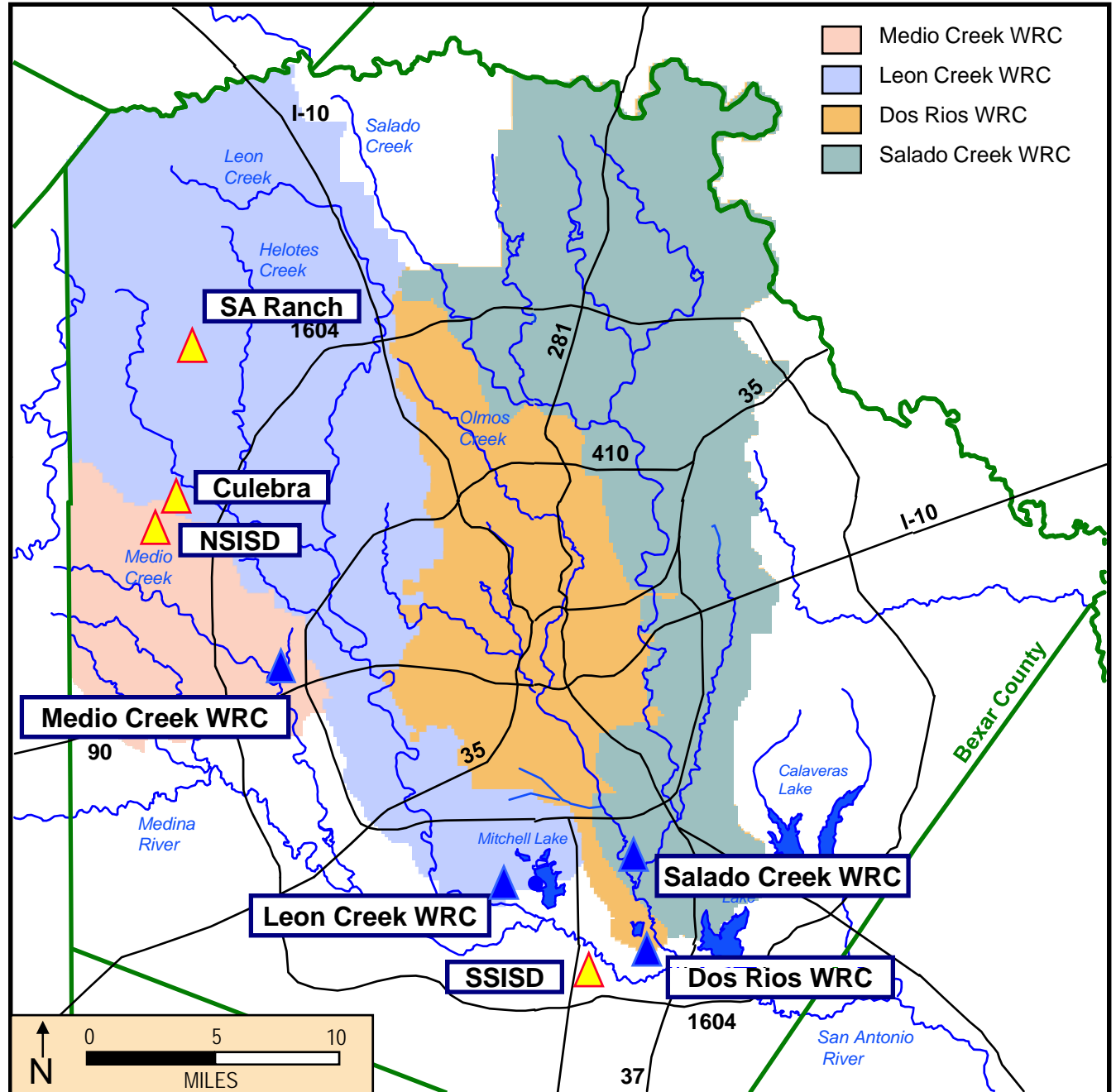


Major and Minor Facilities of the 1990s

Major Facilities

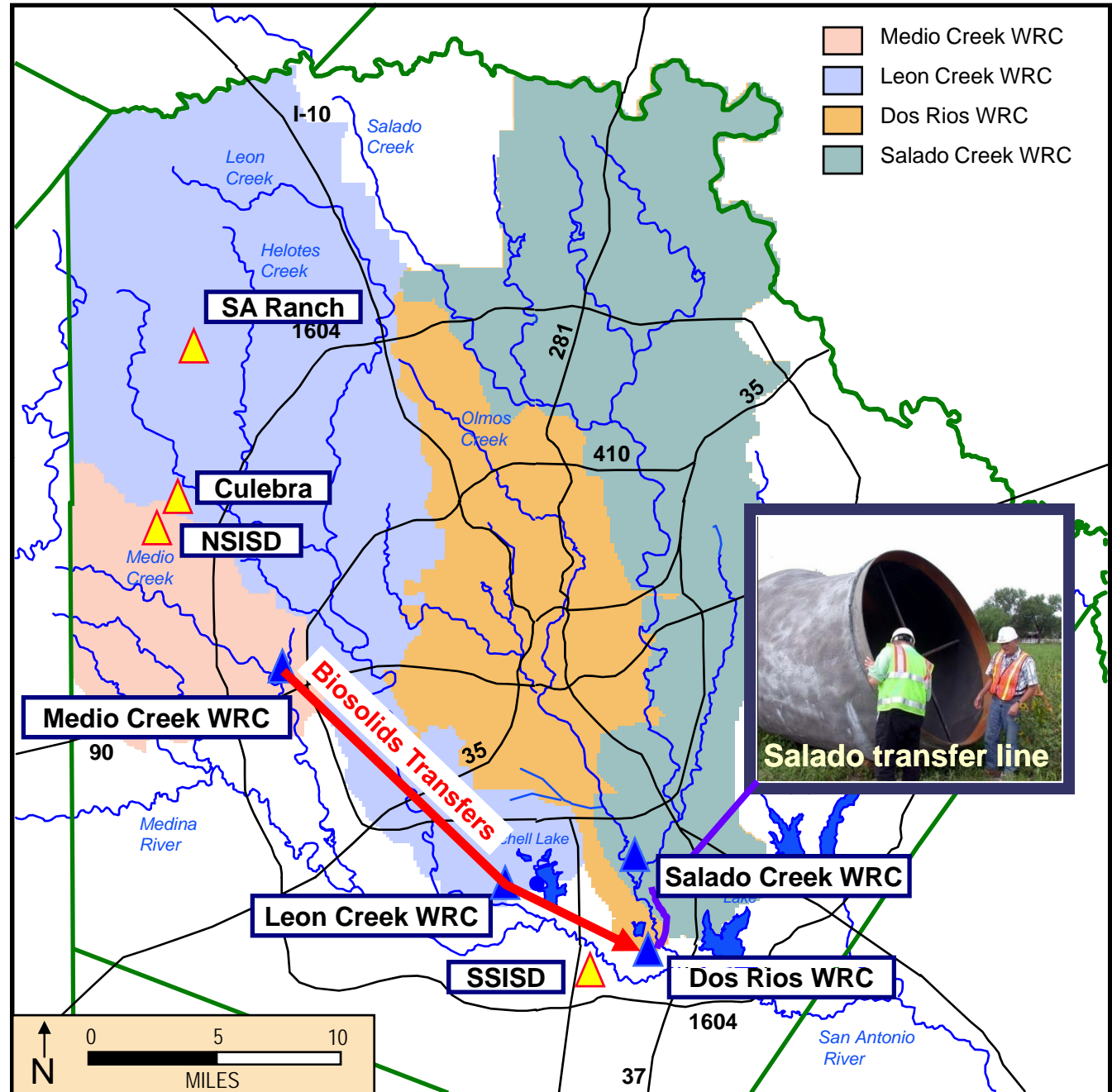


Minor Facilities

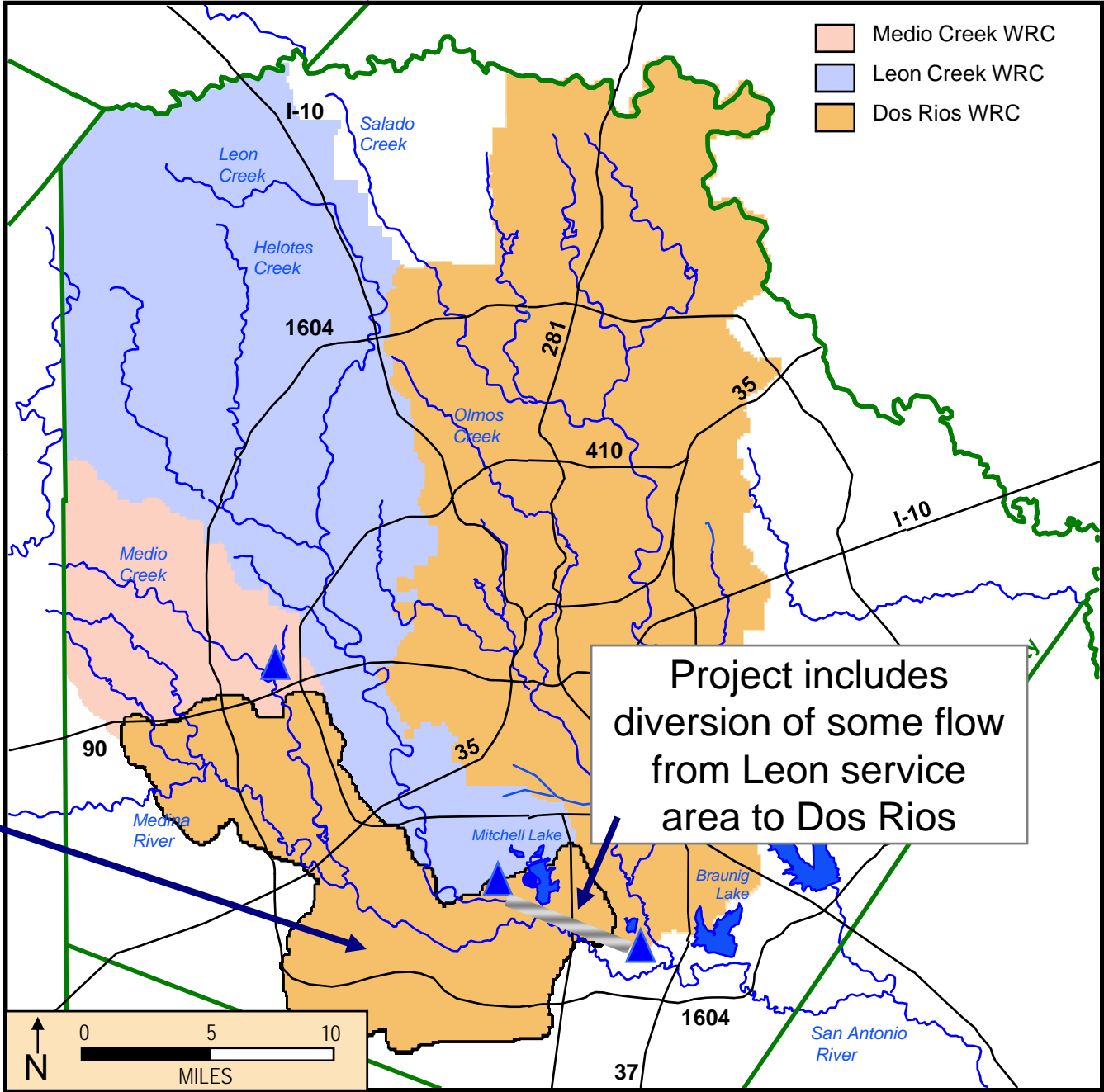


Facility Consolidations and Eliminations

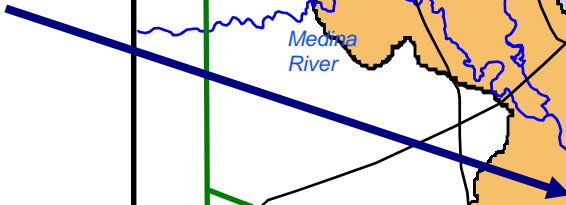
- All minor facilities eliminated
- Salado/Dos Rios sewersheds consolidated and Salado facility eliminated
- Biosolids transfers from Medio/Leon consolidate all solids processing at Dos Rios



Future Service Areas



Area to be added by MRSO

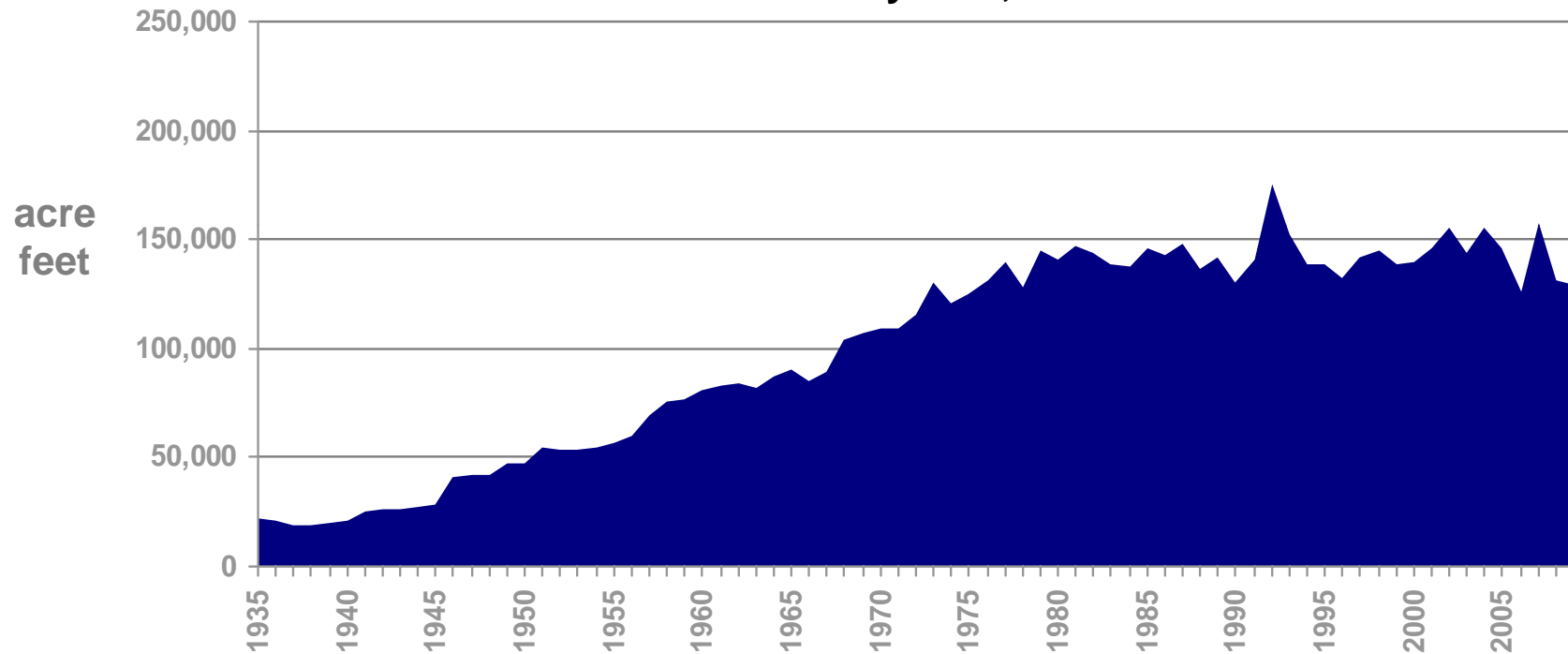


Project includes diversion of some flow from Leon service area to Dos Rios



SAWS' Total Effluent Volumes

Effluent Volumes by Year, 1935 - 2009

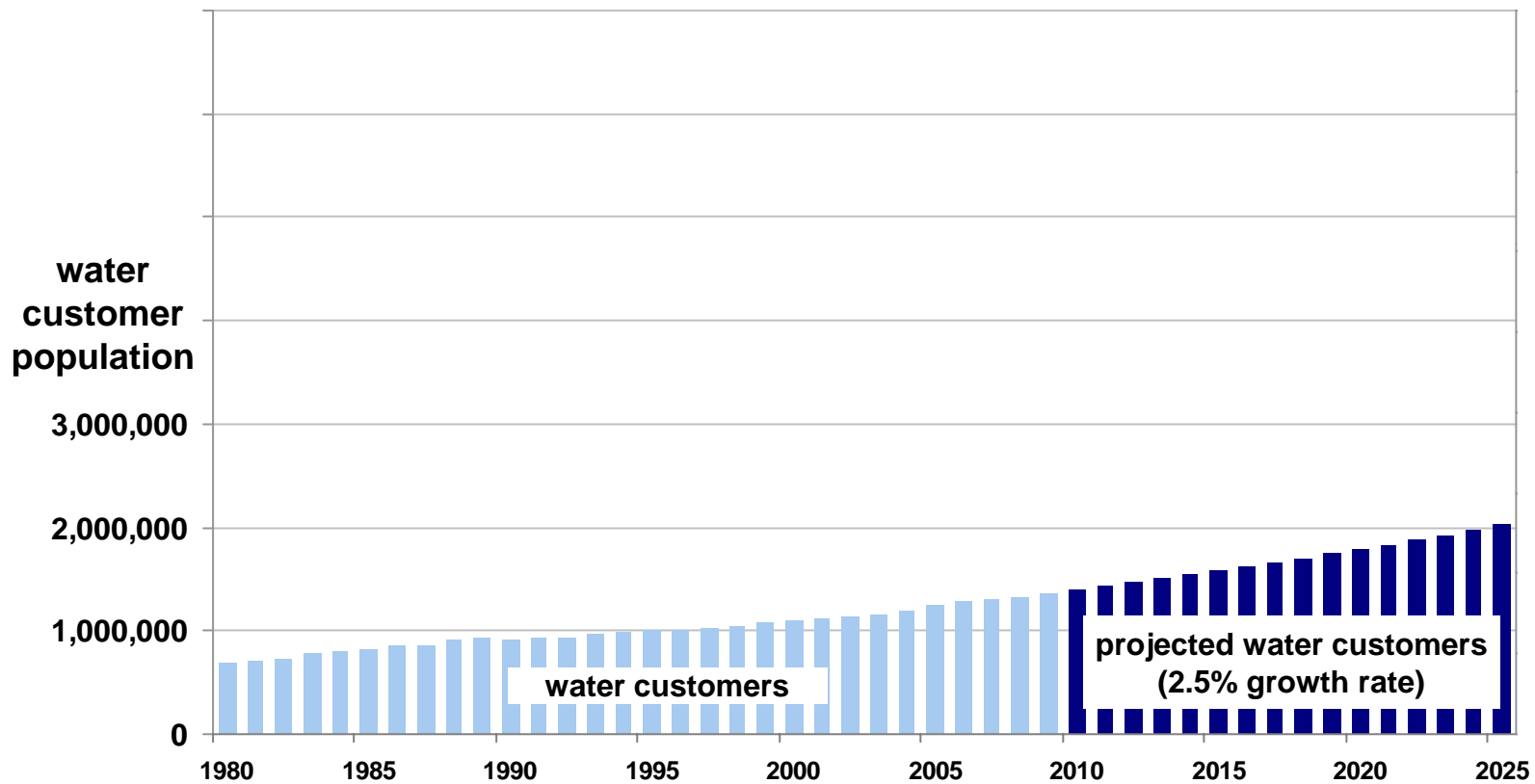


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How far can conservation take us?

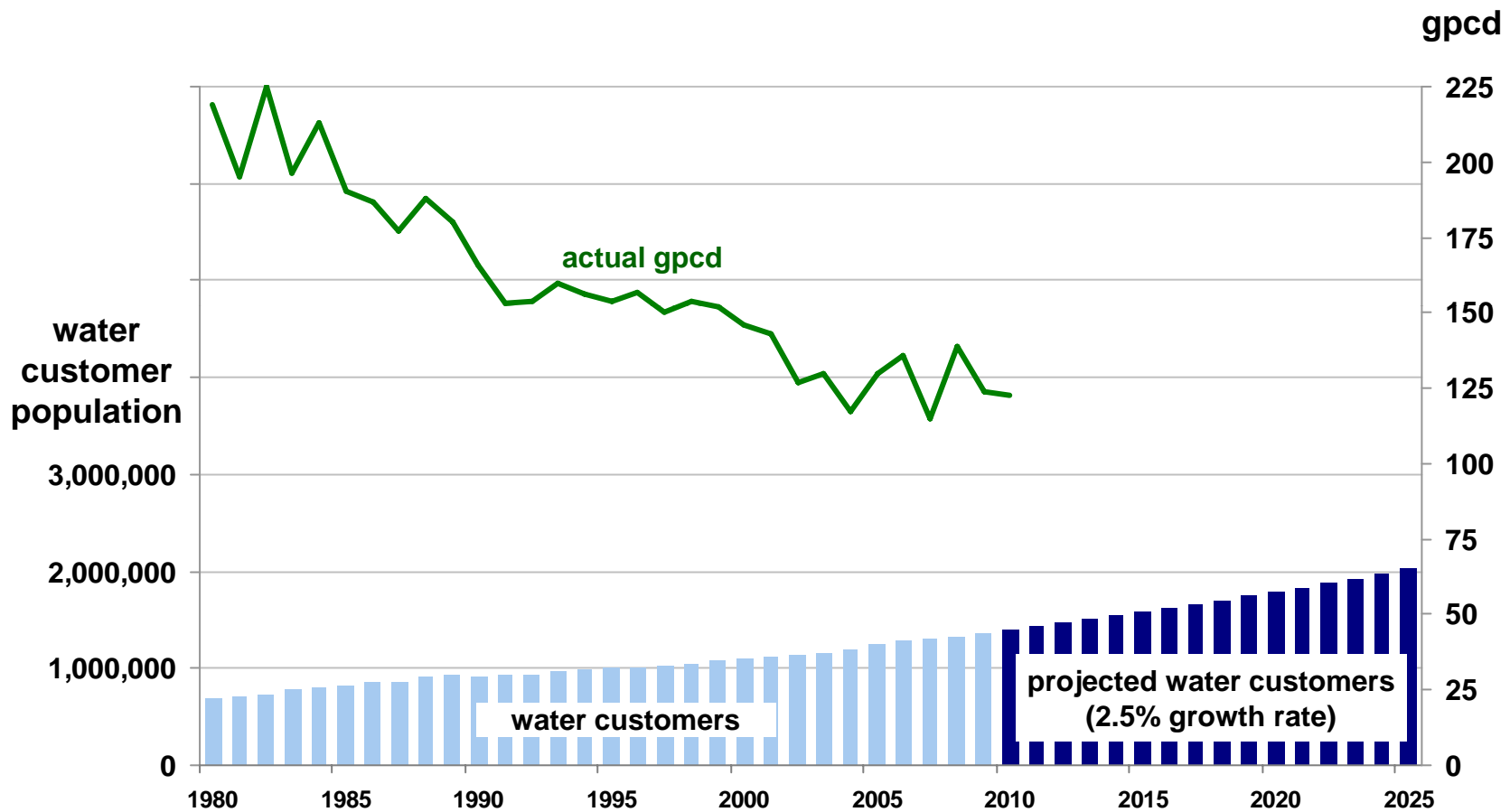


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How far can conservation take us?

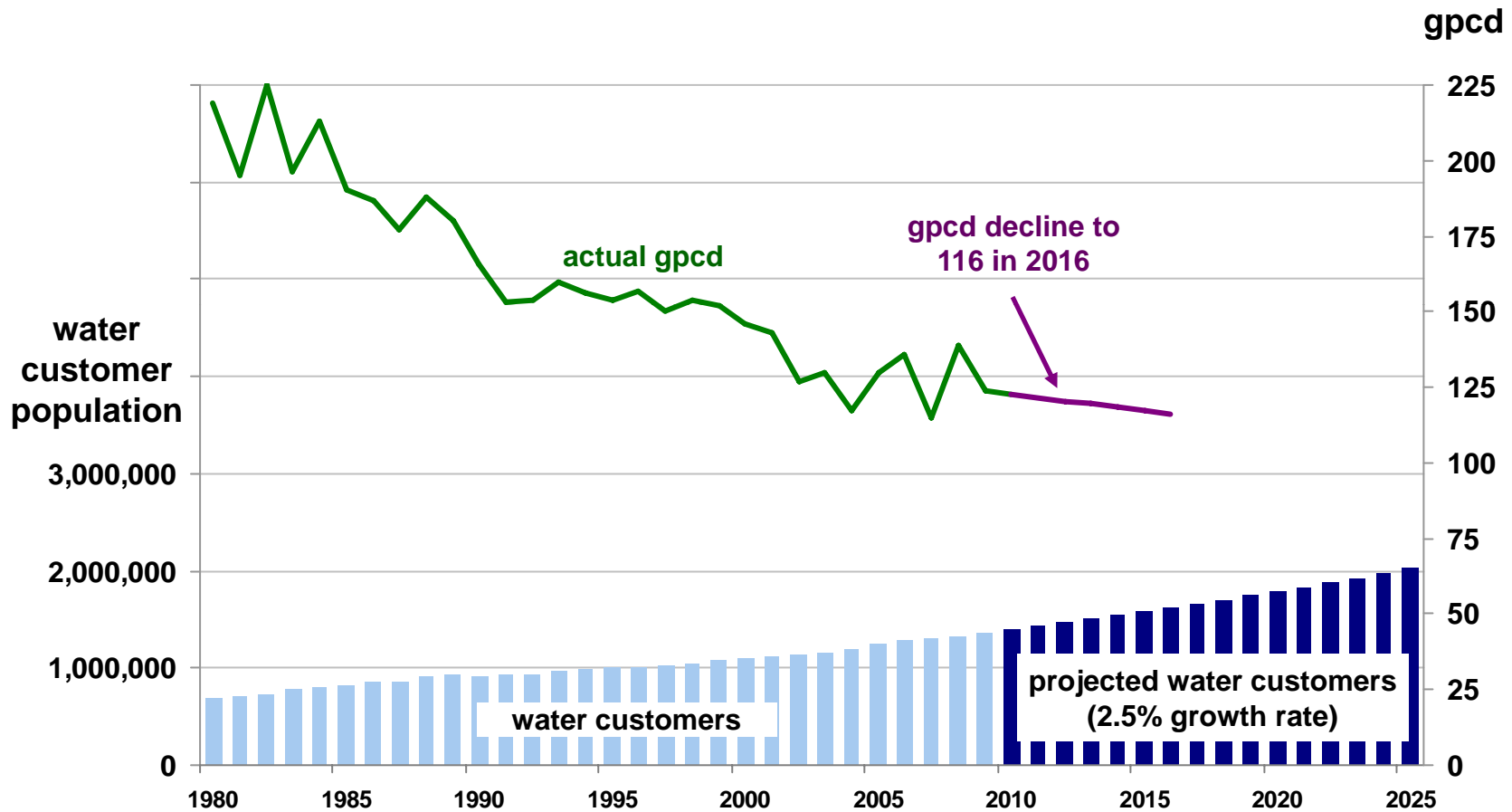


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How far can conservation take us?

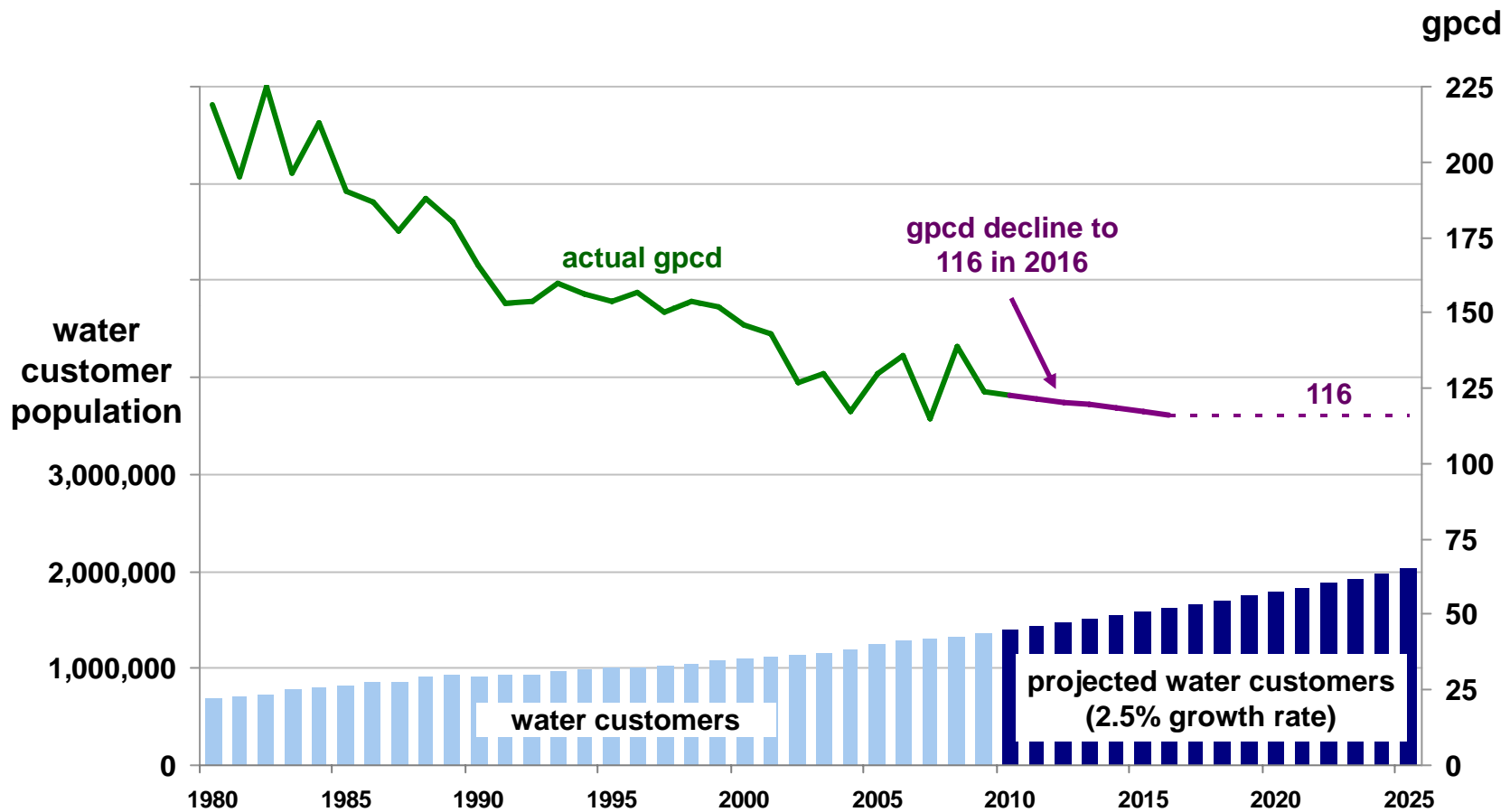


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How far can conservation take us?

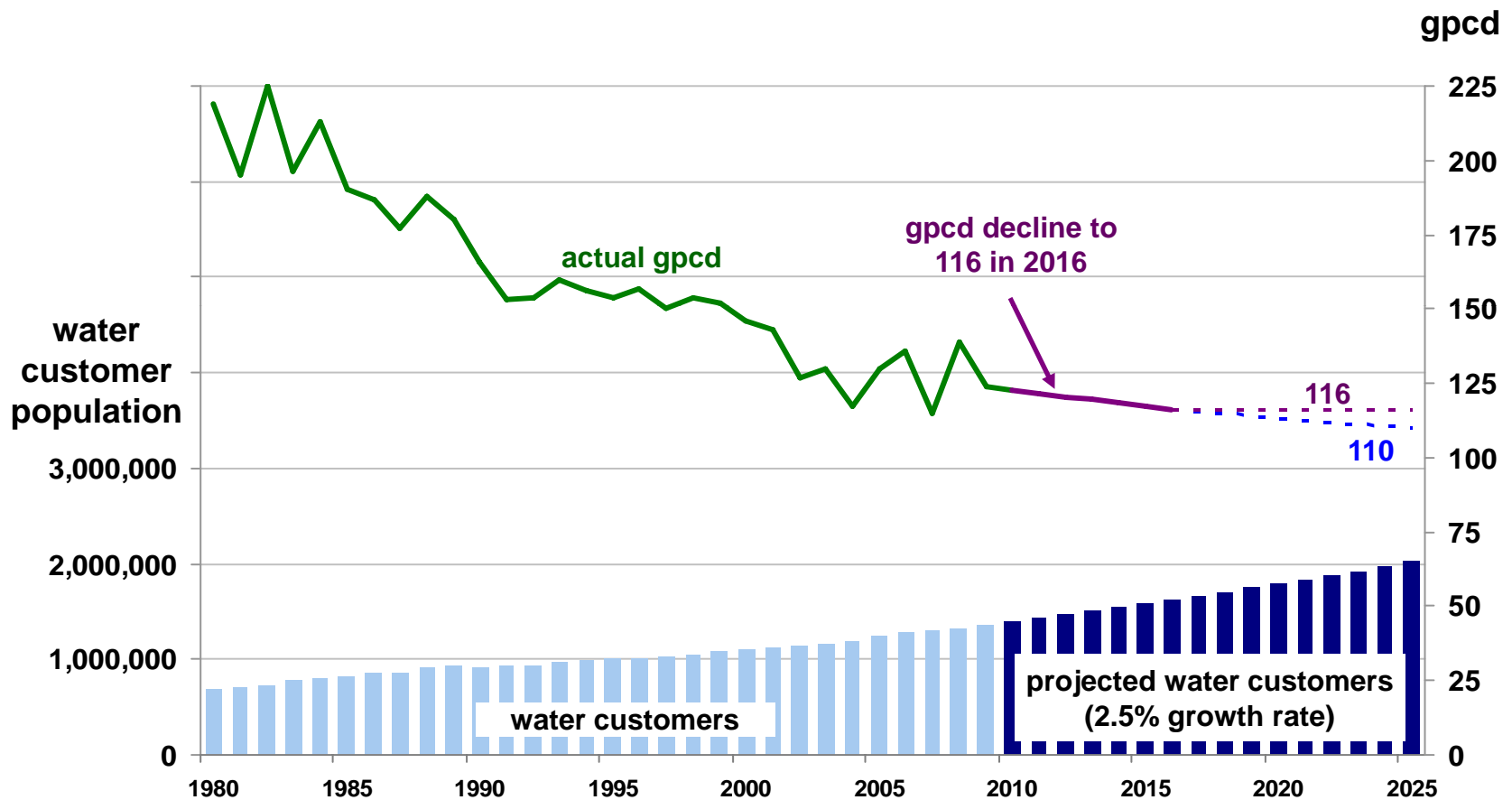


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How far can conservation take us?

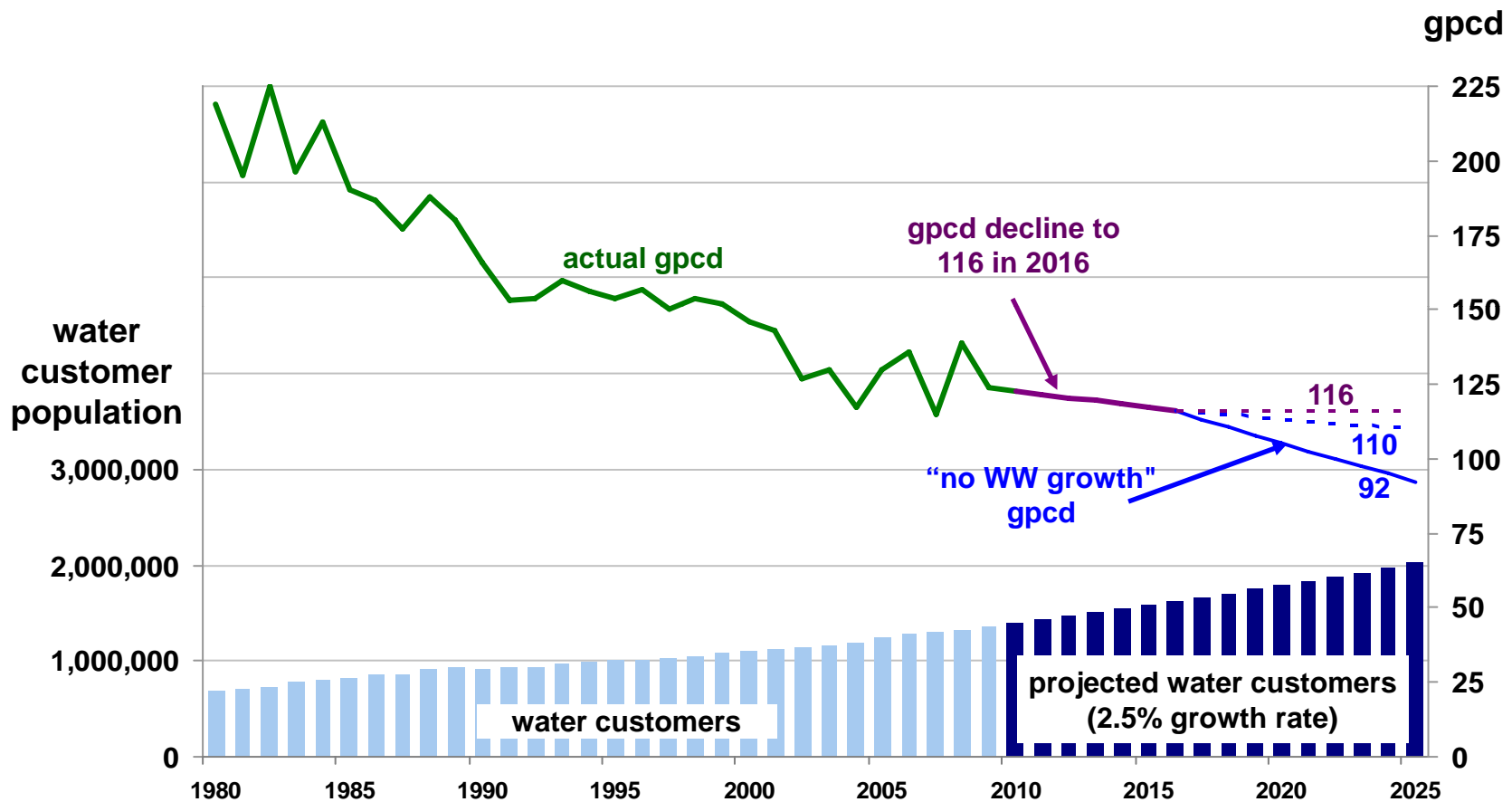


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How far can conservation take us?



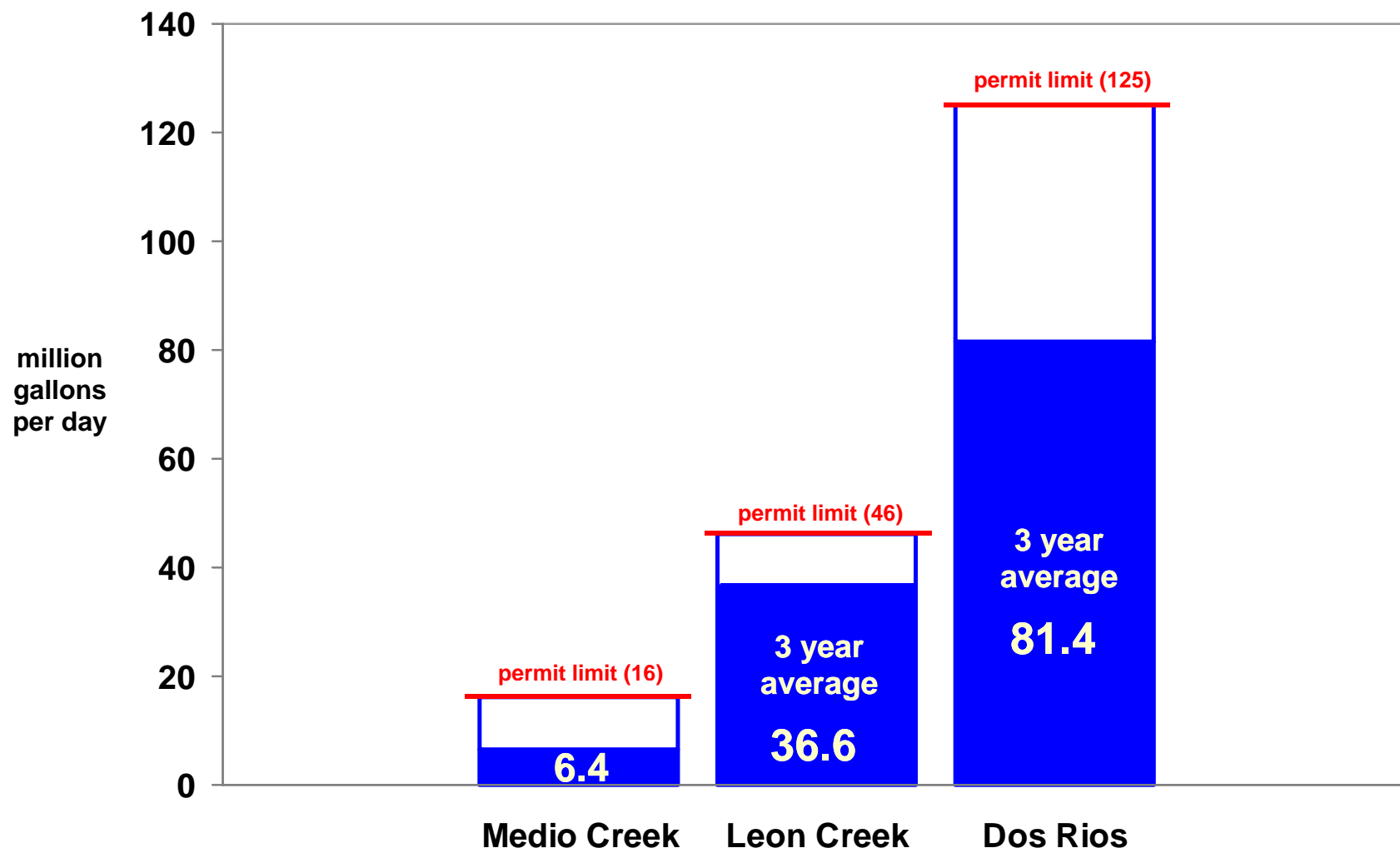
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WRC Capacities and Flows (mgd)

2007 - 2009



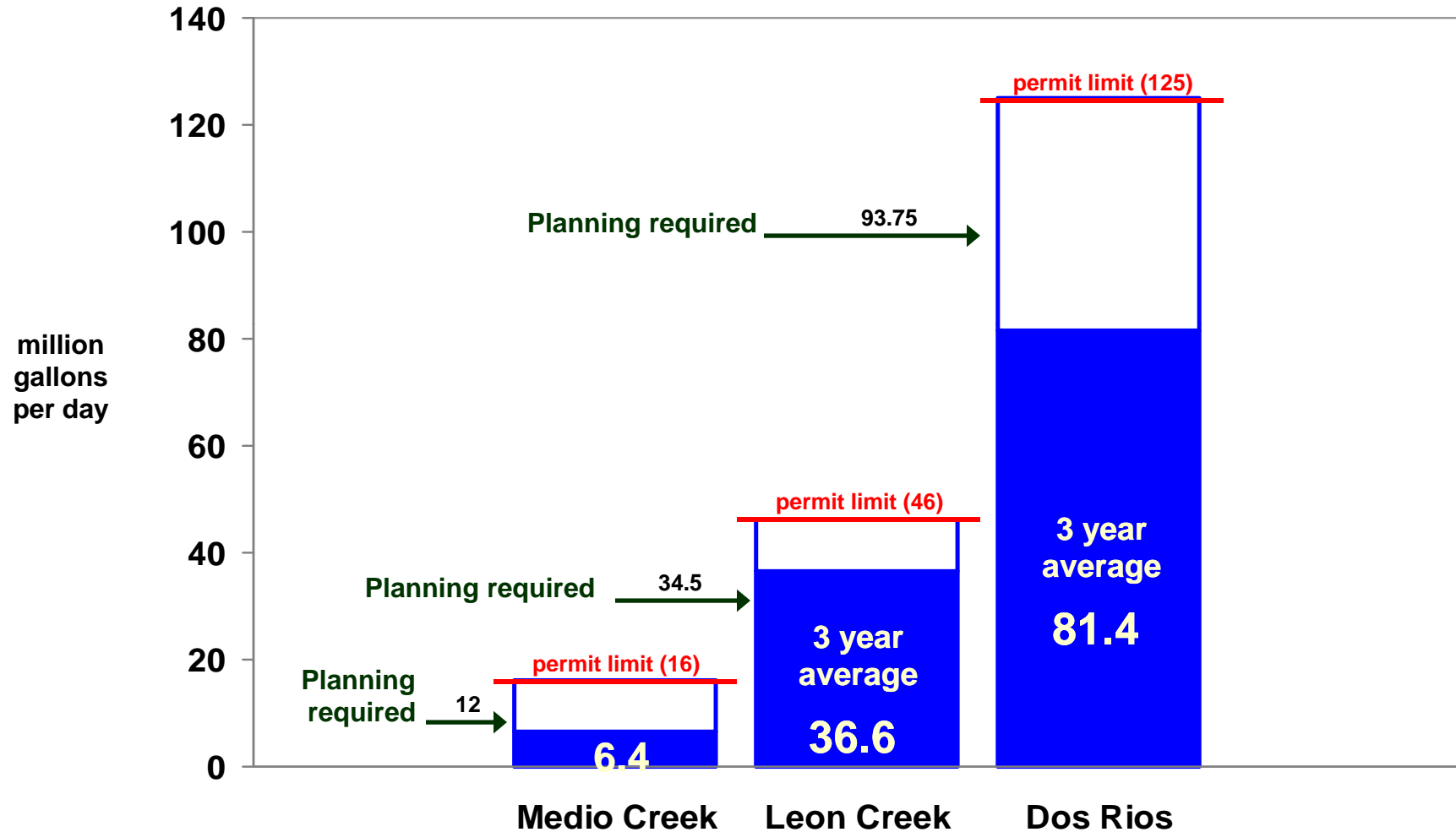
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WRC Capacities and Flows (mgd)

2007 - 2009



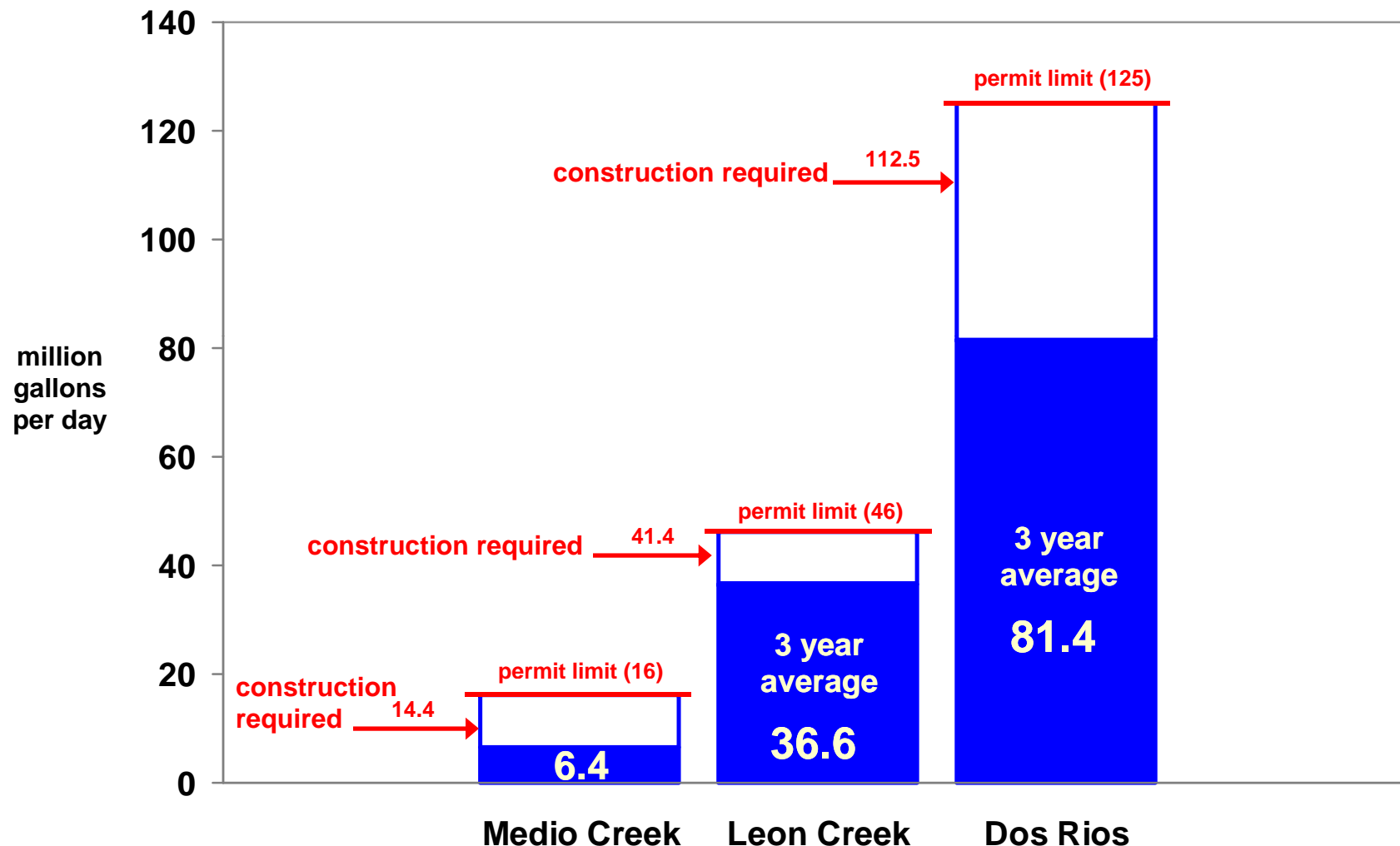
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WRC Capacities and Flows (mgd)

2007 - 2009



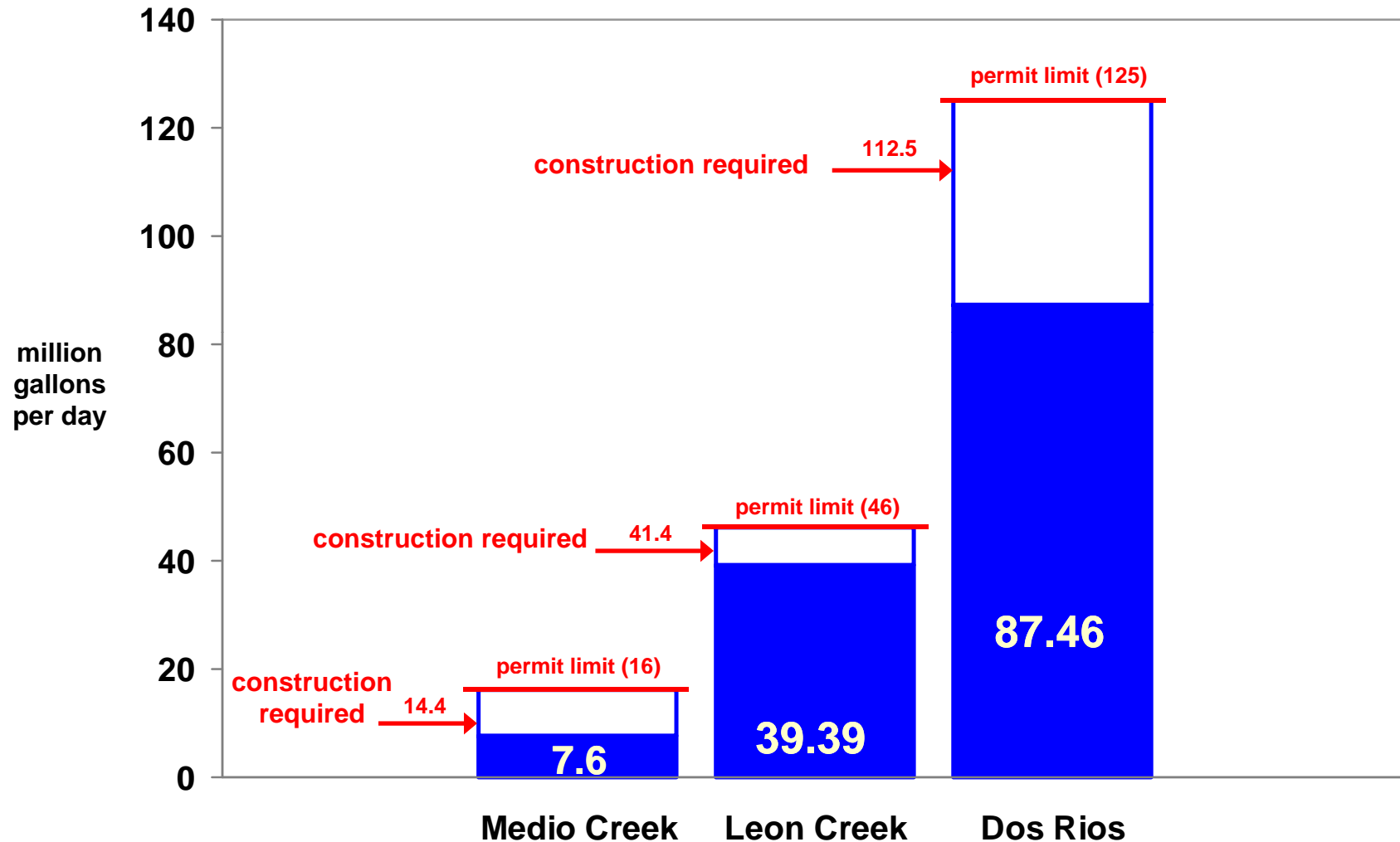
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WRC Capacities and Flows (mgd)

October 2009 thru March 2010



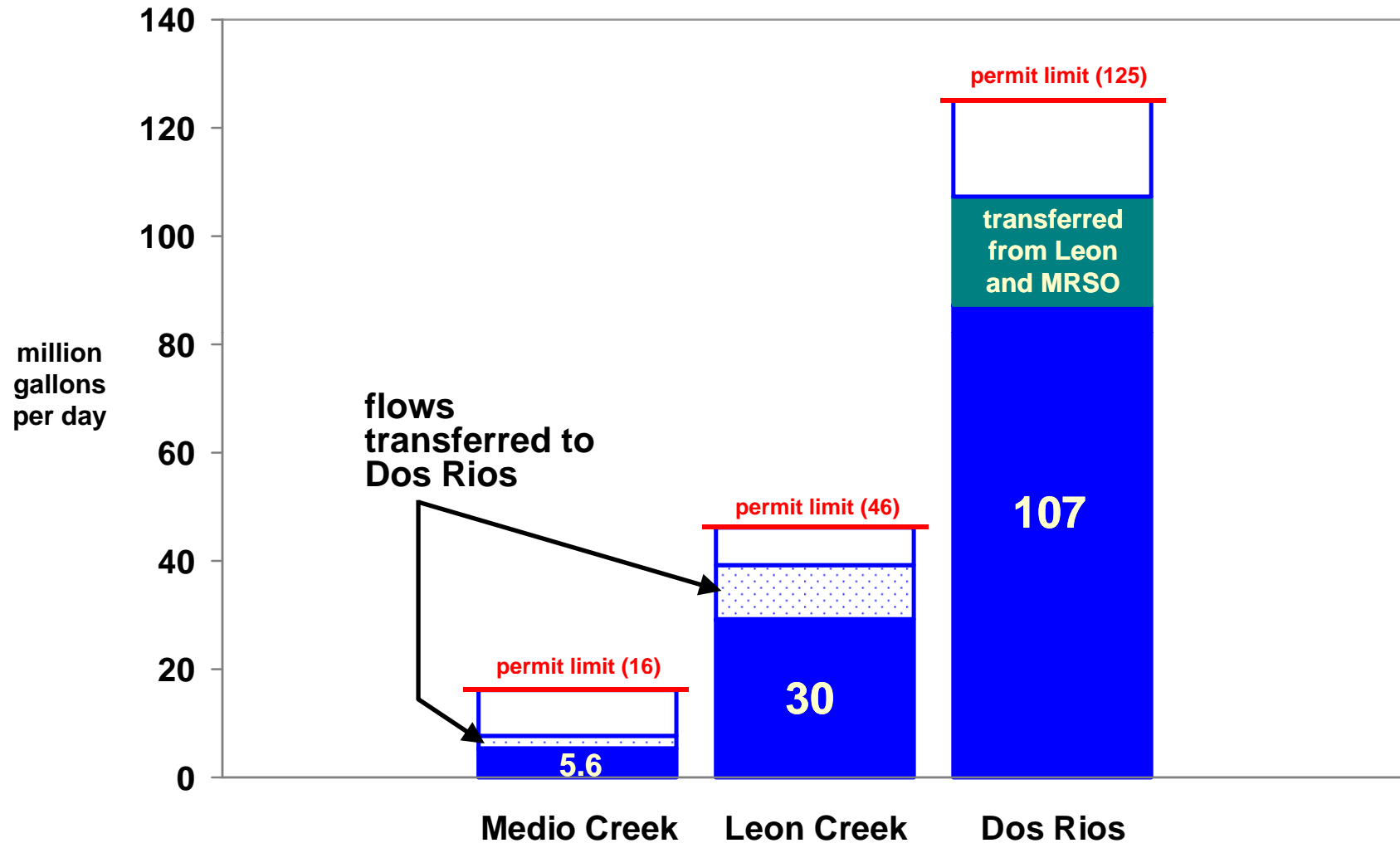
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WRC Capacities and Flows

2016 - With 20 mgd transferred to Dos Rios



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Why add to Dos Rios service area?

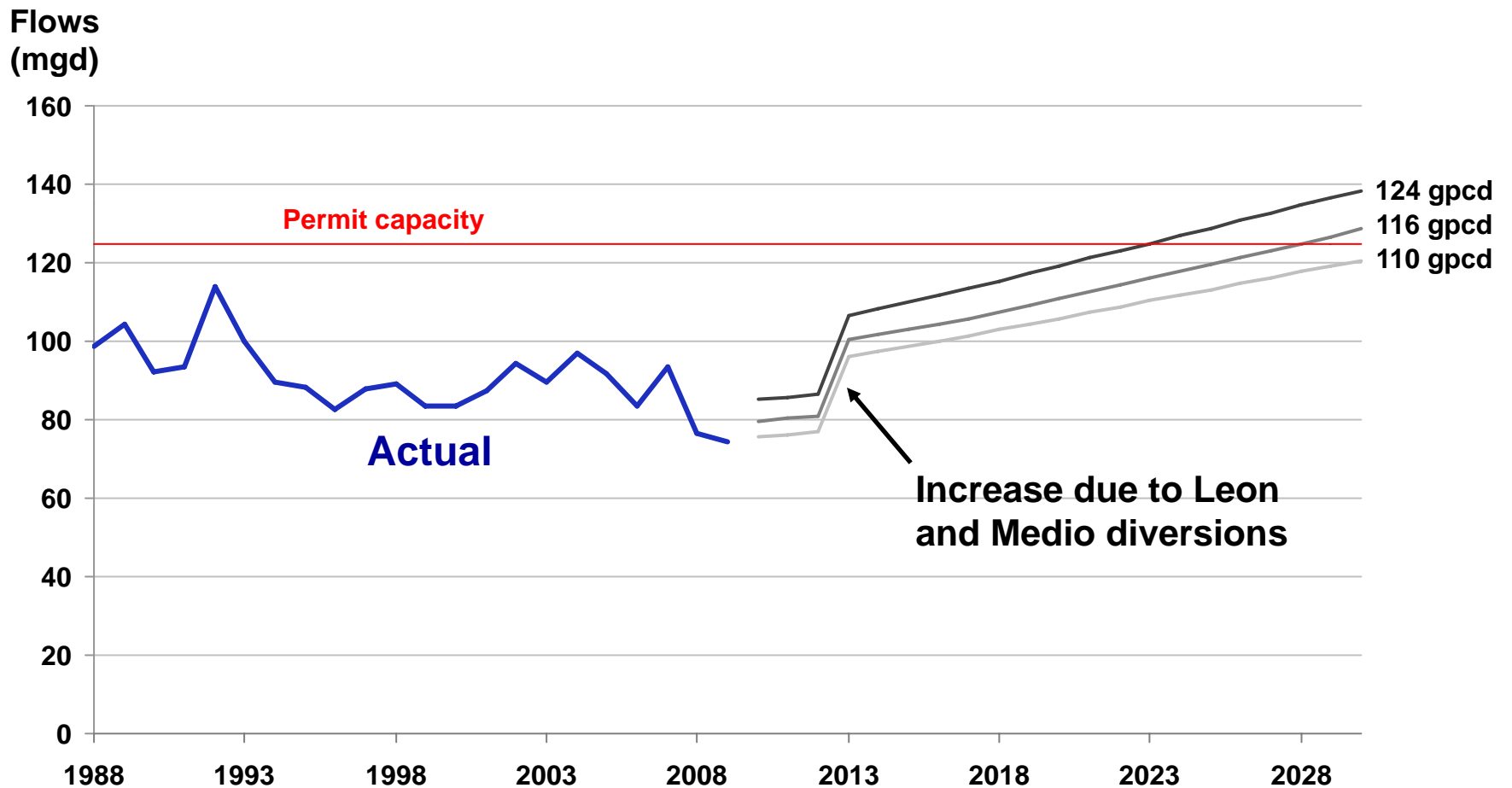
- Provides capacity for future flows from the new Medina River sewershed
- Eliminates current need for expansion at Leon Creek WRC
- Defers need for planned future expansion at Medio Creek WRC
- Lowest cost option

Goals for Dos Rios WRC Re-rating

- Maximize use of existing plant capacity
- Provide additional capacity when needed
- Be prepared for peak wet-weather events
- Minimize rate impacts through sequencing re-rating projects

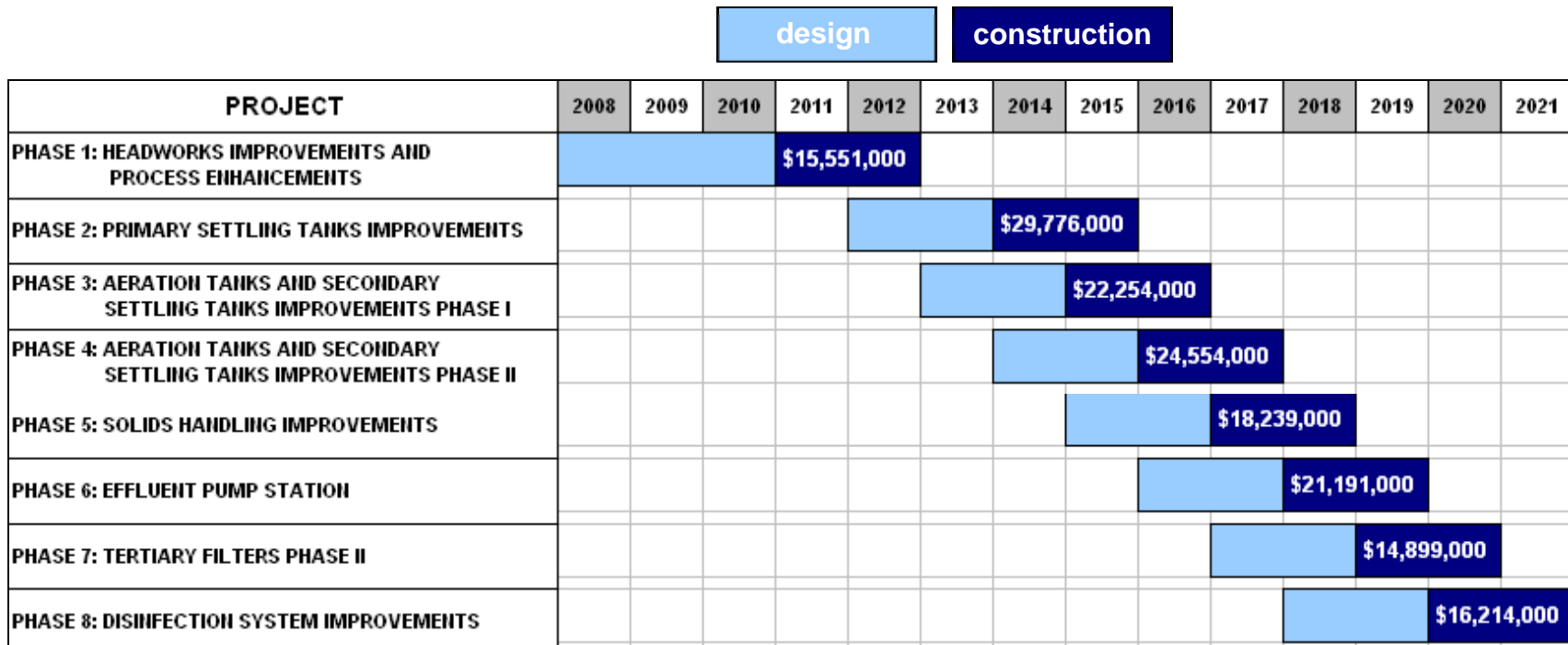
Dos Rios WRC Average Flows

- At 124 gallons per person per day, permit capacity reached in 2023
- At 116 gallons per person per day, permit capacity reached in 2028



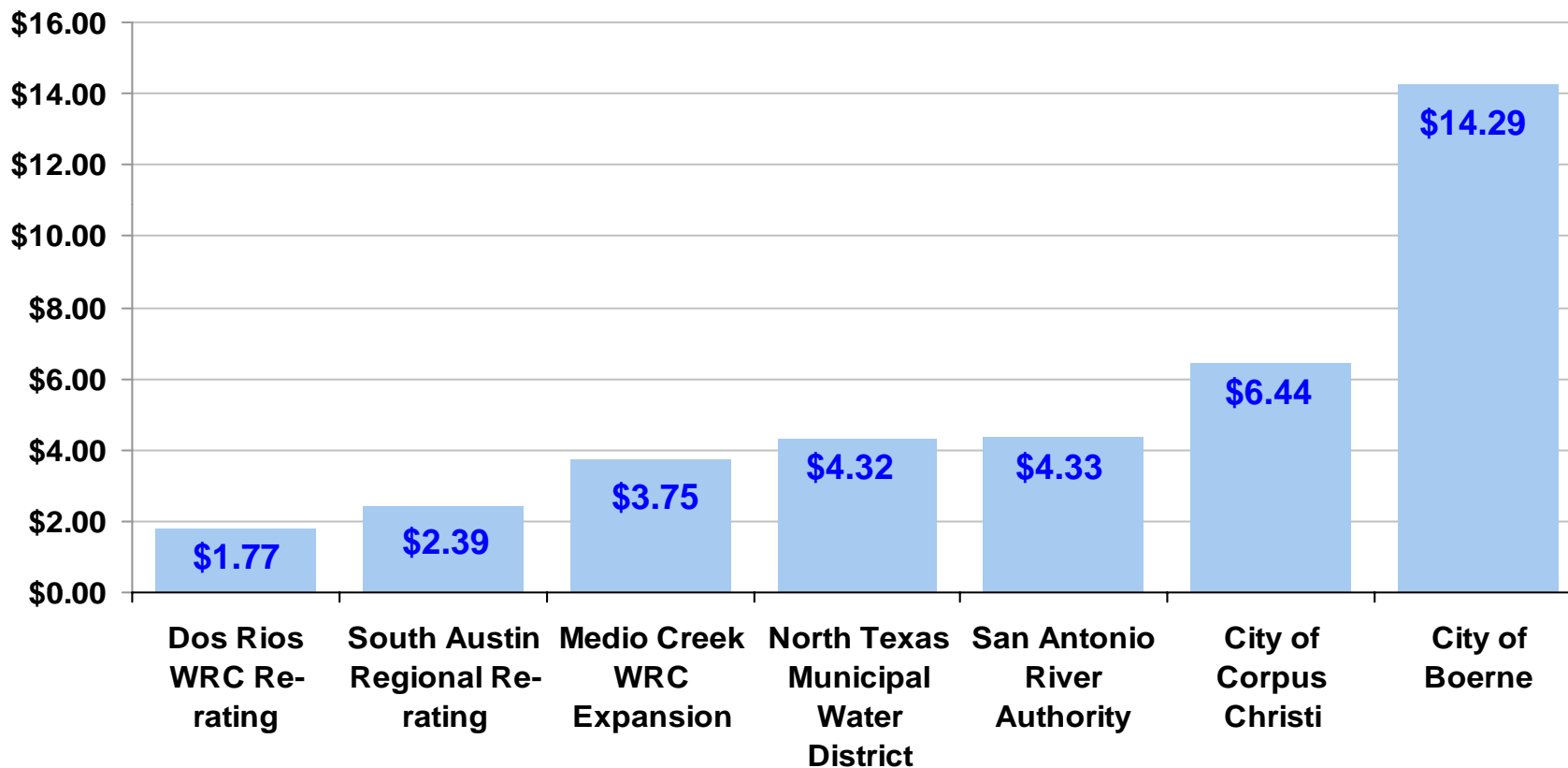
Dos Rios WRC Re-rating Timeline

- Dos Rios WRC “re-rating” is a series of phased improvements
- Will result in 217 mgd capacity at Dos Rios
- Will also address some deficiencies in current infrastructure
- Total cost \$163 million: includes design and construction (in 2010 dollars)



Comparative Costs for Recent Wastewater Treatment Plant Projects (in 2010 dollars)

\$ / gallon of capacity



June 30, 2010

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Other Improvements at Dos Rios

- Total cost: \$61,034,600 (in 2010 dollars)

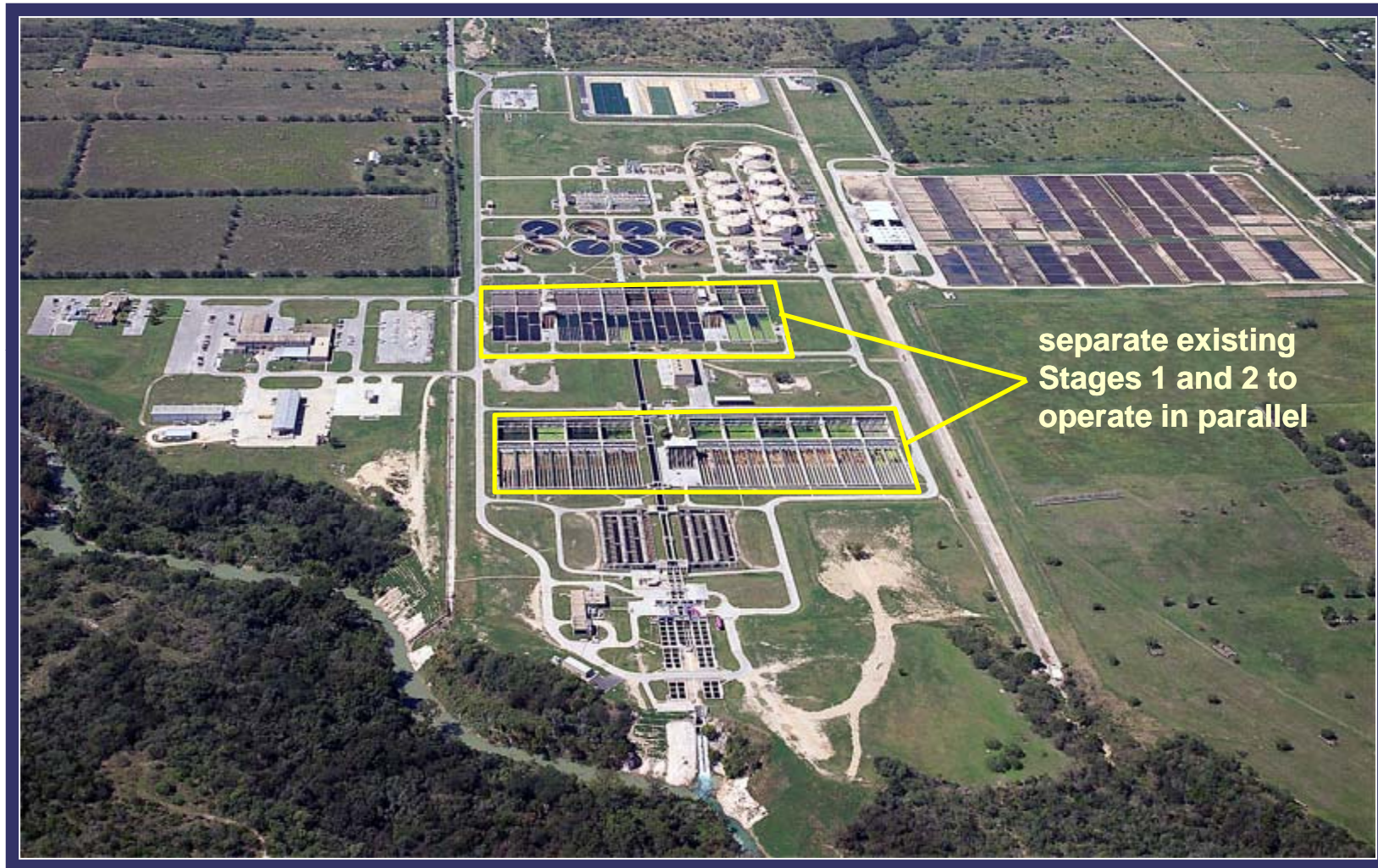
PROJECT	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="background-color: #008000; color: white; padding: 2px 5px;">under construction</div> <div style="background-color: #add8e6; padding: 2px 5px;">design</div> <div style="background-color: #000080; color: white; padding: 2px 5px;">construction</div> </div>						
	2010	2011	2012	2013	2014	2015	
SLUDGE THICKENING AND AERATION SYSTEM IMPROVEMENTS	\$6,134,000						
TERTIARY FILTERS PHASE I	\$14,125,600						
DIGESTER IMPROVEMENTS AND MIXING SYSTEM ENHANCEMENTS - PHASE I	\$10,272,000						
DIGESTER IMPROVEMENTS AND MIXING SYSTEM ENHANCEMENTS - PHASE II		\$8,691,000					
DIGESTER IMPROVEMENTS AND MIXING SYSTEM ENHANCEMENTS - PHASE III			\$7,704,000				
DEWATERING FACILITY IMPROVEMENTS			\$12,646,000				
SCADA UPGRADE				\$1,462,000			

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Dos Rios WRC Re-rating



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Treatment in the 1980s

That was then.....

RIVER SEWAGE 'DEPLORABLE'

By RICHARD SMITH
STAFF WRITER

City officials say raw sewage being dumped into the San Antonio River can't be cleaned out in time to forestall a threatened lawsuit by the state, which calls the river's condition "deplorable."

The possible lawsuit is yet another problem plaguing the city stemming from its troubled sewer system.

The city also faces an investigation and possible lawsuit over the drowning death of a 12-year-old youngster who fell through an uncovered manhole while chasing a volleyball near Tafolia Middle School.

Charging the city with contaminating the San Antonio River with raw sewage to the point of causing fish kills, the Texas Department of Water Resources says it wants an explanation by Nov. 28.

TDWR wants to know why the city hasn't complied with orders to clean up the river.

TDWR Executive Director Charles Nemir said that information collected from city plants — particularly the Rilling Road Wastewater Treatment Plant — allege city facilities are dumping treated wastes into the river "with a quality approaching that of raw sewage."

State demands clean-up

He also charged the city with not keeping its promise, made Oct. 14, 1982 by City Council, to act in good faith to meet state clean-water standards.

A letter from Nemir zeroes in on the 60-year-old Rilling Road plant, citing mismanagement and unsound solid waste operations.

"In light of this information, I am seriously considering a staff recommendation to request the attorney general to institute legal action against the city for permit violations," Nemir stated in the letter, which was sent to Mayor Henry Cisneros and city councilmembers.

Monitoring

Nemir said the agency has been monitoring the city's sewerage treatment operations for several months and came to this opinion:

"These conditions and the deplorable condition of the San Antonio River has now led us to conclude the city has failed in its agreed-upon responsibilities regarding operation and maintenance of existing facilities," Nemir said.

"There's not enough time to correct," said City Councilwoman Helen

Dutmer, who is a member of wastewater treatment committees for both the city and the region.

She said steps are being taken by the city to obtain rights-of-way for the planned Dos Rios wastewater treatment plant at the junction of the Medina rivers.

"It takes time to get equipment," Dutmer said. The plant could be completed by 1986 and 1988.

However, another who asked not to be named in the letter was a member of the federal government who said the city needs the \$350,000 for the project in order to meet the deadline.

"The letter we received from the federal government shows the need for the funding," the official said.

Up to 80 percent of the project is being funded by the Reagan administration.

Because of the delay, the city had to consider a five-fold over the project in order to meet the deadline.

Residents downstream have re-

City may get in hot water

over river pollution

SARA directors threaten legal action

in sewage battle

Nov 17, 1983

S.A.'s raw sewage angers neighbors

City could face stiff fines

By DAVID ANTHONY RICHELIEU
STAFF WRITER

The city of San Antonio may face fines of up to \$10,000 per day for spewing sewage into the San Antonio River from the Rilling Road treatment plant.

Frustrated and out of patience, directors of the San Antonio River Authority voted Wednesday to give notice that unless solutions are forthcoming, the river authority will haul the city into court.

The SARA deadline is Dec. 14, the date of next month's meeting.

River authority manager Fred Pfeiffer told the board that despite two previous letters to Mayor Henry Cisneros over the unacceptable effluent going downstream from the Rilling plant, the agency has yet to receive a formal reply.

The plant is already under fire from the Texas Department of Water Resources and the federal Environmental Protection Agency.

Residents downstream have re-

ported recent fish kills believed to have been caused by the unacceptable pollution from the plant on city's South Side.

Angry board members from Karnes, Wilson and Bexar counties all pushed for legal action Wednesday, citing the months of silence and inaction by the city.

A report of a recent sampling done by the SARA environmental chief Hayes K. Galitski showed the Rilling Road plant is discharging five times more solid matter into the river than permitted. He added there is no evidence of anything being done to fix the plant or operate it properly.

The city's Leon Creek and Salado Creek plants are functioning within standards, he said.

Board member Truett Hunt of

Karnes County said, "It is incomprehensible that the city of San Antonio would spend millions of dollars to improve the conditions and appearance of the river within the city while discharging untreated sewage into the water flowing into Wilson and Karnes counties."

Board member Clifton McNeel of Bexar County called the city's treatment of downstream residents shocking. She added that if the river flowed the other direction and the polluted water was going through the downtown River Bend, the city would have cleaned it up long ago.

Hunt suggested the city be forced to move its proposed Applewhite surface water reservoir from the Medina River to the San Antonio River — placing the city's new source of

drinking water just below the malfunctioning Rilling plant.

After conferring with legal counsel Ralph Brown, Pfeiffer urged the board wait for the city's reply, due Nov. 28, to a Texas Department of Water Resources letter.

"Then, if the solutions are not immediate enough or satisfactory, we can seek injunctive relief in the courts," Pfeiffer said.

Brown told the board the law calls for fines of from \$1,000 to \$10,000 per day for unauthorized discharges.

In other action, the board:

- Authorized accepting the low bid by Michael Construction Co. of Biloxi, Miss., to build a \$9.4 million marina, dam and other river channel improvements on Nueva Street.

Nov 10, 1983

Nov 17, 1983

Wastewater Treatment Today

This is now....



mexican stoneroller



longear perch

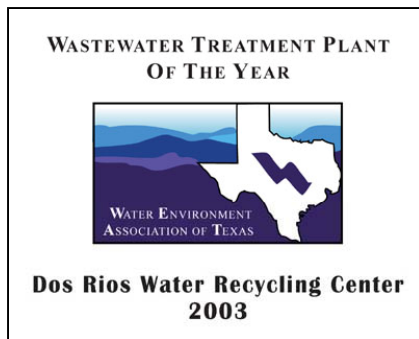


logperch



SA Express-News
June 13, 2002

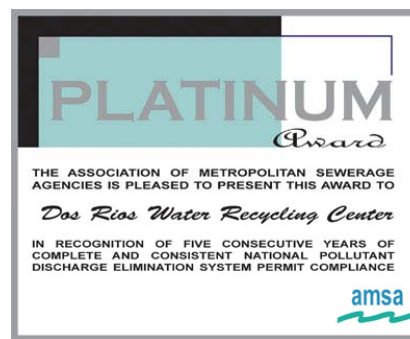
"Best in Texas"



"Best in Nation"



Permit Compliance



Environmental Stewardship



Conclusions and Recommendations

- **Conservation will not continue to limit wastewater flow growth**
- **Dos Rios WRC is upgradable** and has available biological capacity
- **Proceed with Dos Rios WRC re-rating**, headworks improvements and process enhancements project as planned
- **Leon Creek capacity achieved by transferring flow** to MRSO and Dos Rios
- **Delay future Medio Creek expansions** with flow transfers to Dos Rios
- **Continually re-evaluate** growth in flows in all three sewersheds and adjust Dos Rios WRC re-rating schedule as needed

June 30, 2010

Updated Master Plan for Water Recycling Centers





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June 30, 2010

Steve Clouse
Chief Operating Officer