RECHARGE FRESNO
New Water Now

Consideration of Recommendations for Water Rate Increase

February 26, 2015

Clean, Safe, Reliable Drinking Water

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WATER . . .
Can't live without it . . .

City of FRESNO
DEPARTMENT OF PUBLIC UTILITIES

Regional Water Supply Challenges

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Pine Flat Reservoir

"Our regional groundwater basin loses the equivalent of 1.5 times the size of Pine Flat Reservoir every year."

- *Jonathan Traum, P.E.*
  US Geologic Survey
  Sept 29, 2014

Regional Water Supply Challenges

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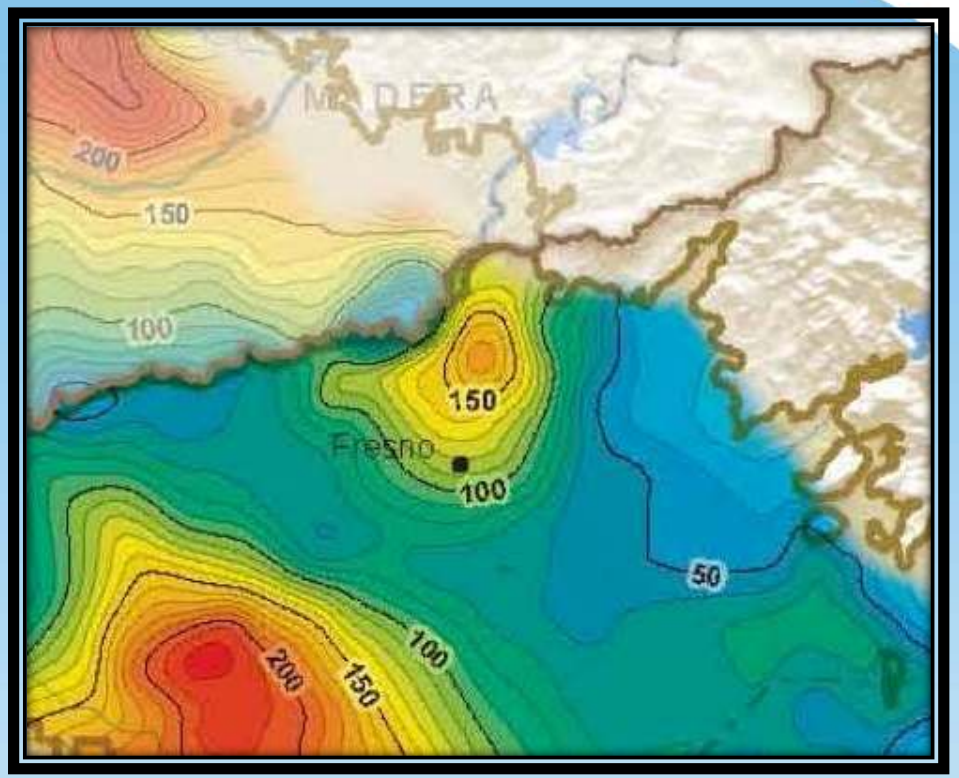


"In the final prioritization, Kings Sub-basin ranks as the ninth highest priority basin in the DWR South Central Region, and ranks 17th among the 515 basins that were prioritized statewide."
- Kings Basin Water Authority

2014 Sustainable Groundwater Management Act

- Mandates "the management and use of groundwater … without causing *undesirable results*"
- Sustainable groundwater management depends upon creating more opportunities for ***robust conjunctive management of surface water and groundwater resources***

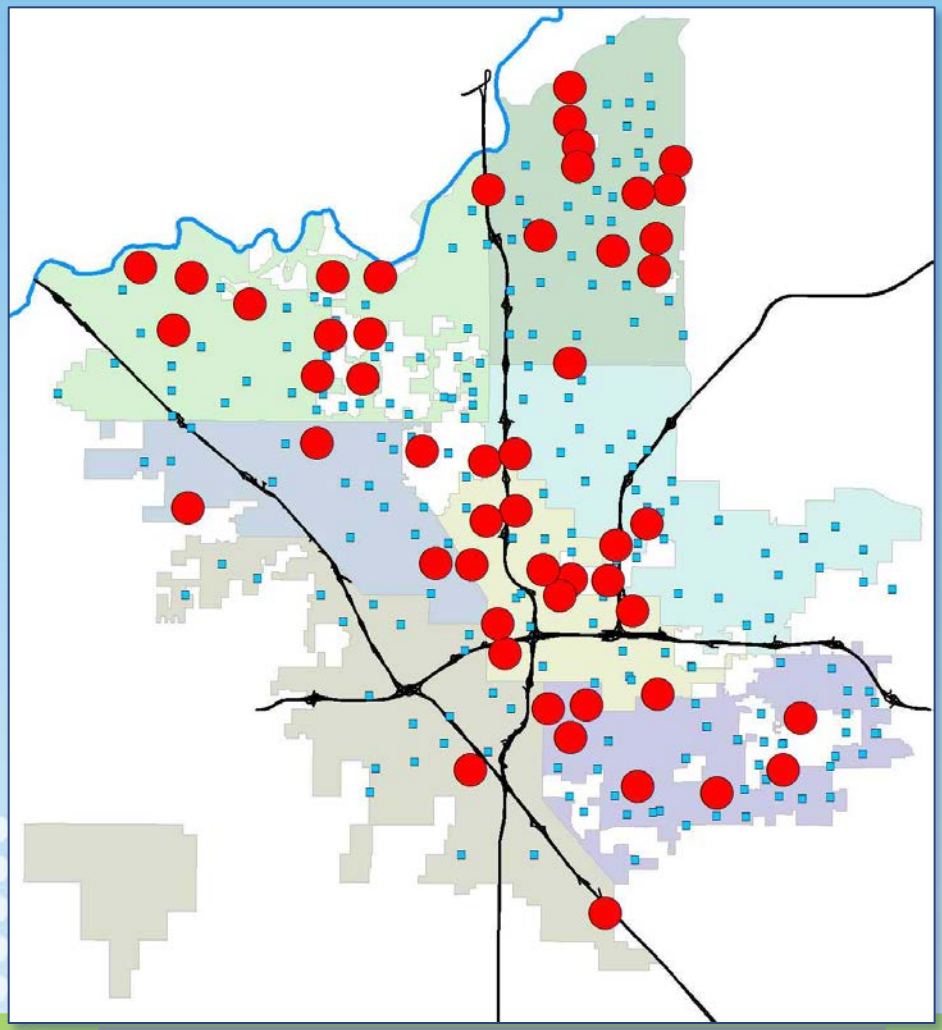
*"**The State's primary role** is to provide guidance and technical support …**and to step in on an interim basis when, but only when, local agencies fail to exercise their responsibilities** as set forth in this legislation."*
- Mark Cowin, Director, Division of Water Resources

"*Undesirable Result*"

- Chronic **lowering** of groundwater levels
- Significant and unreasonable **reduction** of groundwater storage
- Significant and unreasonable **degraded** water quality

Fresno's Water Supply Challenges

Wells Running Dry

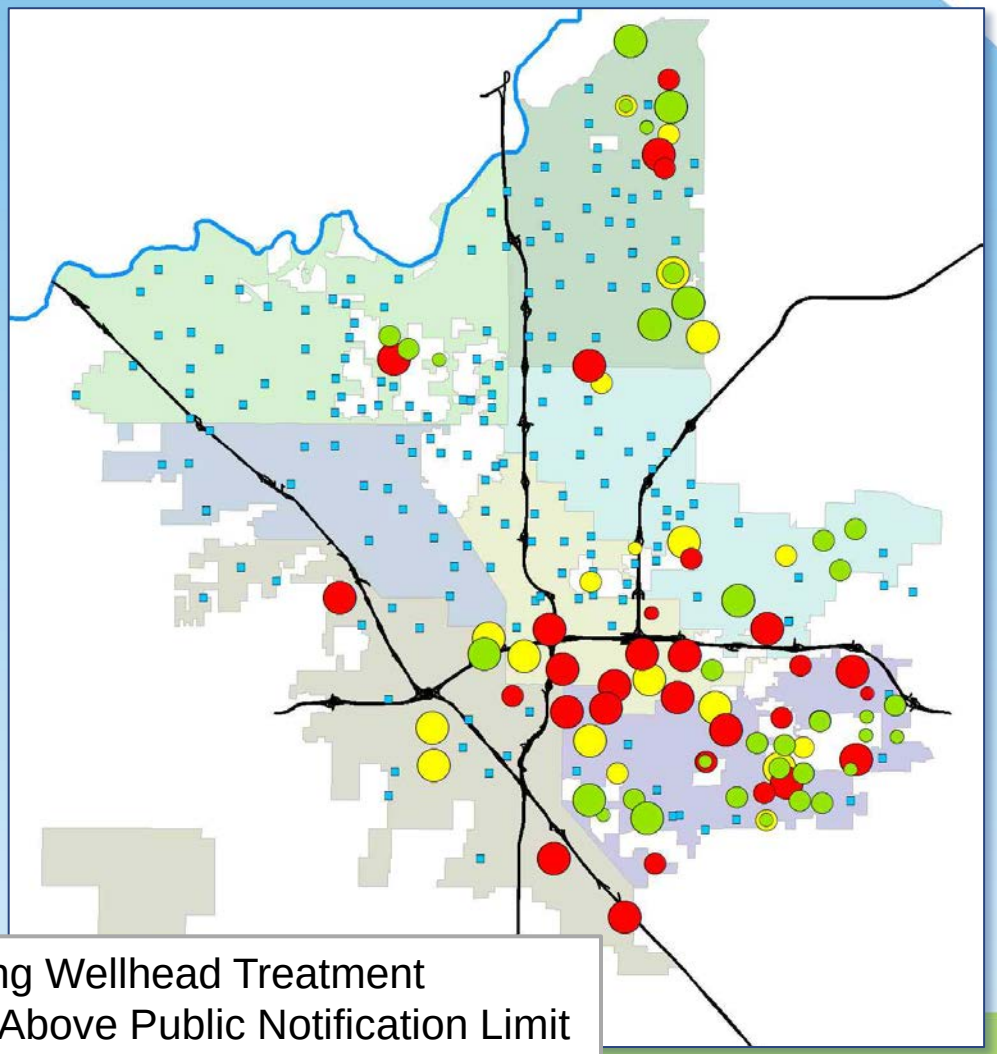


- 266 active wells
- 23 wells to be removed from service as groundwater continues to decline
- If groundwater decline similar to 2014 *(4 feet versus 1 foot)*, 21 more wells at risk in 2015

Fresno's Water Supply Challenges

1,2,3-trichloropropane (TCP)

- 82 total contaminated, not treated, wells in the system
- New water quality regulations for 1,2,3-TCP will reduce supply
- TCP detected in 73 wells
- 124 million gallons per day impacted
- Treatment cost = $170M - $300M



Capital Plan Objectives

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- **Comply with laws and regulations** – water quantity, water quality, and design of rates, fees, and charges
- **Implement surface water treatment** – as has been recommended for the last 25 years to reduce groundwater pumping
- **Enhance water conservation** – continue to work with community to reduce overall water demands
- **Continue rehabilitation and replacement of existing infrastructure** – avoids expensive failures and maintains system reliability (*400-year replacement schedule*)
- **Continue groundwater recharge** – expedite the recovery of groundwater levels in combination with reduced pumping

Five-Year Capital Plan

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Summary of Projects and Financing

PROJECTS

Southeast Surface Water Treatment Facility	*$186.4 million*
Raw Water Pipelines	*$ 98.4 million*
Finished Water Pipelines	*$ 55.4 million*
Water System Renewal and Replacement	*$ 82.5 million*
Groundwater Recharge	*$ 6.4 million*

TOTAL = $429.1 million

ORIGINAL FINANCING ASSUMPTIONS

$50 million, SRF Loan (2%, 20 years)

$290.6 million, Revenue Bonds (5.5%, 30 years)

$88.5 million, Cash (pay-as-you-go)

Five-Year Capital Plan

RECHARGE FRESNO
Securing Our Water Future

Summary of Projects and Financing

PROJECTS

Southeast Surface Water Treatment Facility	*$186.4 million*
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Water System Renewal and Replacement	*$ 82.5 million*
Groundwater Recharge	*$ 6.4 million*

TOTAL = $429.1 million

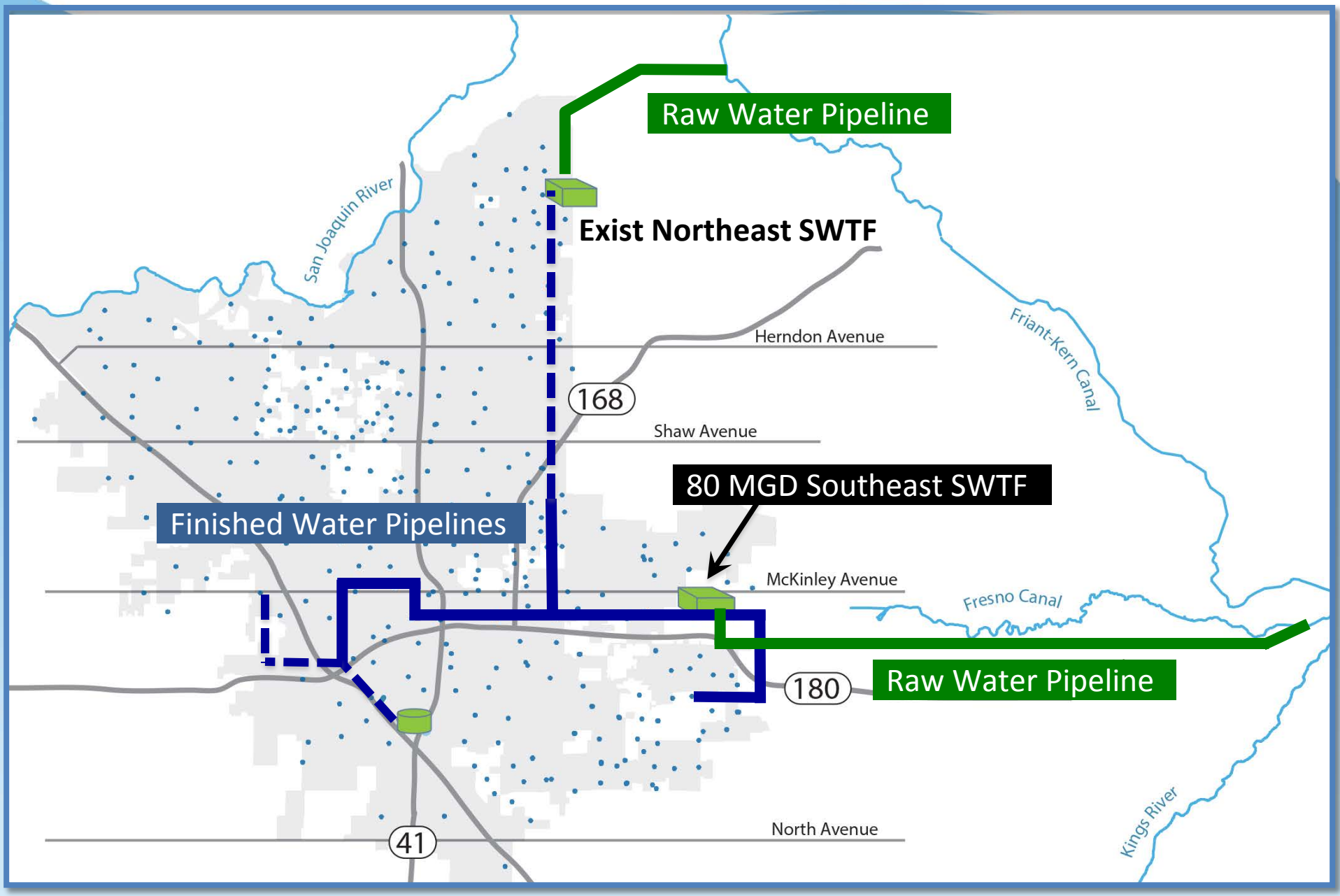
FINANCING with SRF LOAN

$186.4 million, SRF Loan (1.663%, 30 years) ← *$104 million savings in finance cost with SRF loan*

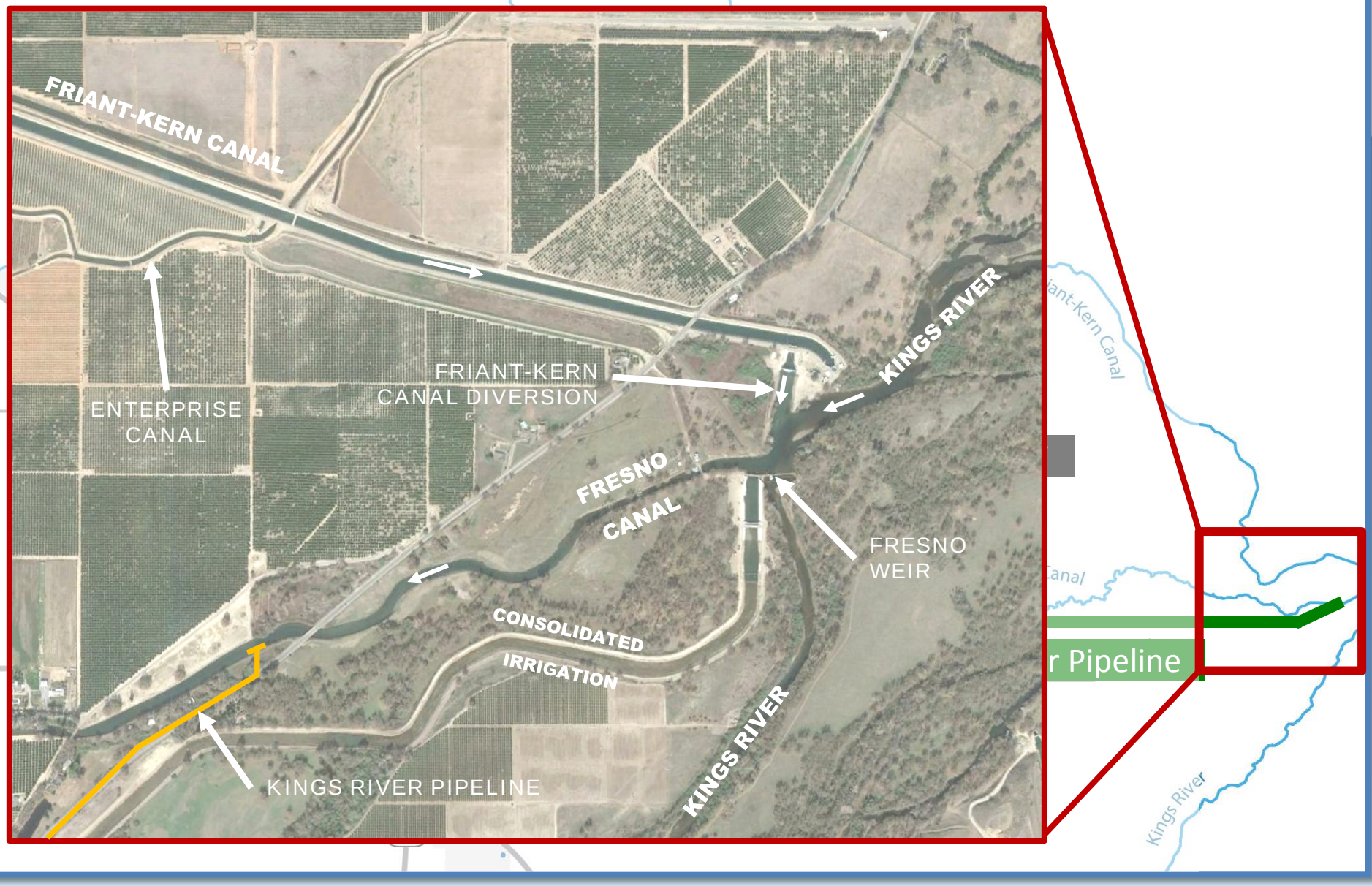
$154.2 million, Revenue Bonds (5.5%, 30 years) ← *Applications to be submitted to State for additional SRF loans*

$88.5 million, Cash (pay-as-you-go)

Recharge Fresno Projects



Recharge Fresno Projects



City of Fresno Water System

Existing Conditions

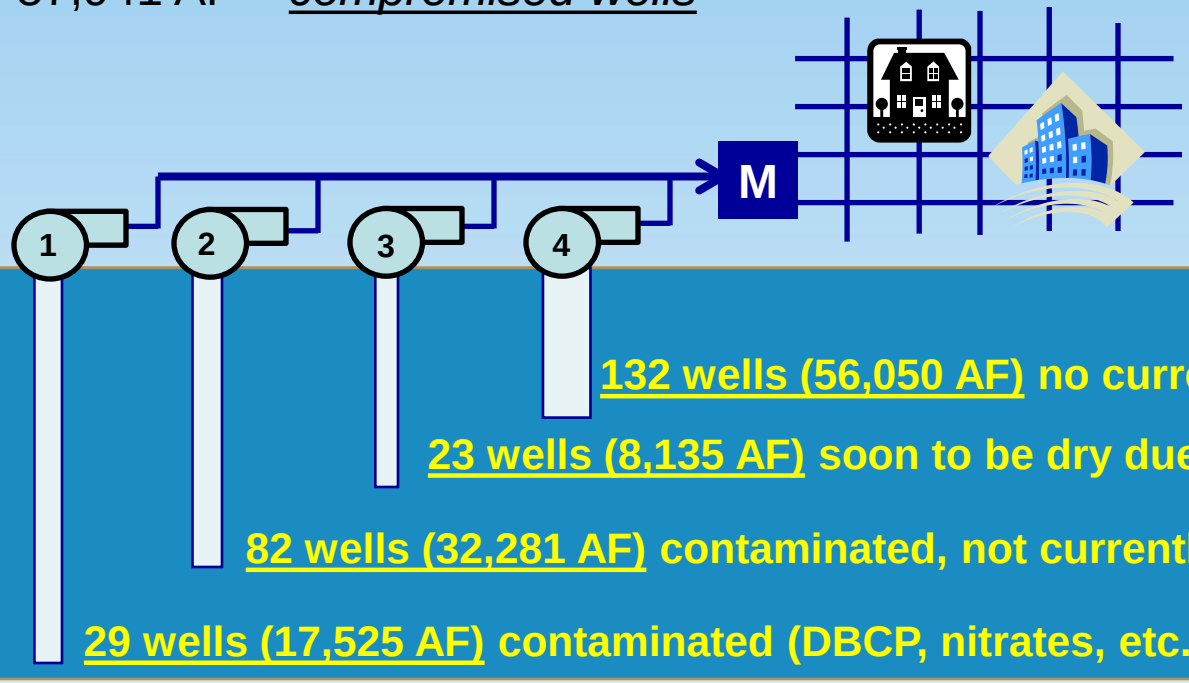
City's Current Groundwater Profile

56,050 AF – non-compromised wells

57,941 AF – *compromised wells*

Groundwater System

- 266 wells
- PG&E $1 million per month
- Four types of wells



132 wells (56,050 AF) no current quality or quantity issues

23 wells (8,135 AF) soon to be dry due to dropping water levels

82 wells (32,281 AF) contaminated, not currently treated (pending)

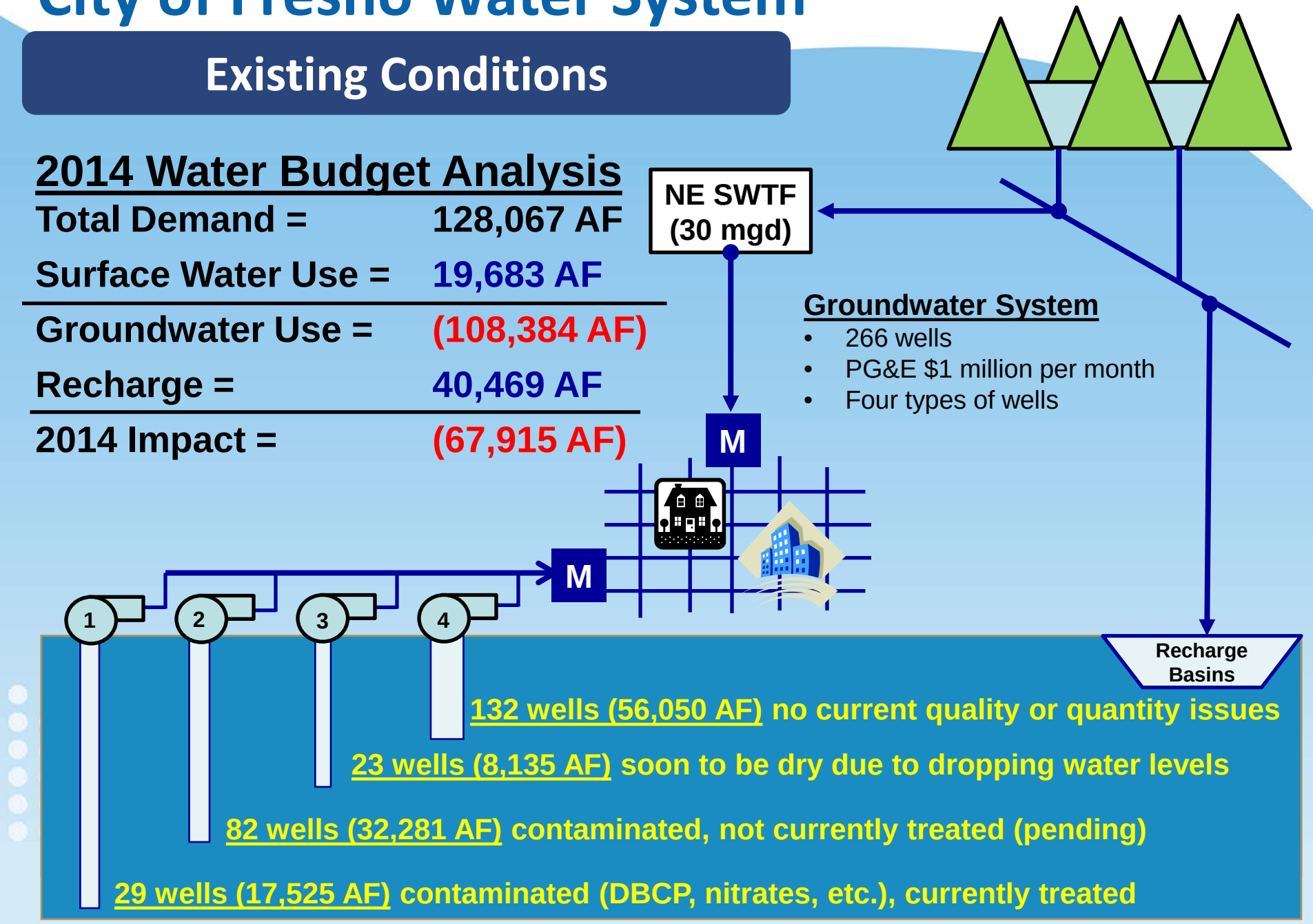
29 wells (17,525 AF) contaminated (DBCP, nitrates, etc.), currently treated

City of Fresno Water System

Existing Conditions

2014 Water Budget Analysis

Total Demand =	128,067 AF
Surface Water Use =	19,683 AF
Groundwater Use =	(108,384 AF)
Recharge =	40,469 AF
2014 Impact =	(67,915 AF)



City of Fresno Water System

Existing Conditions

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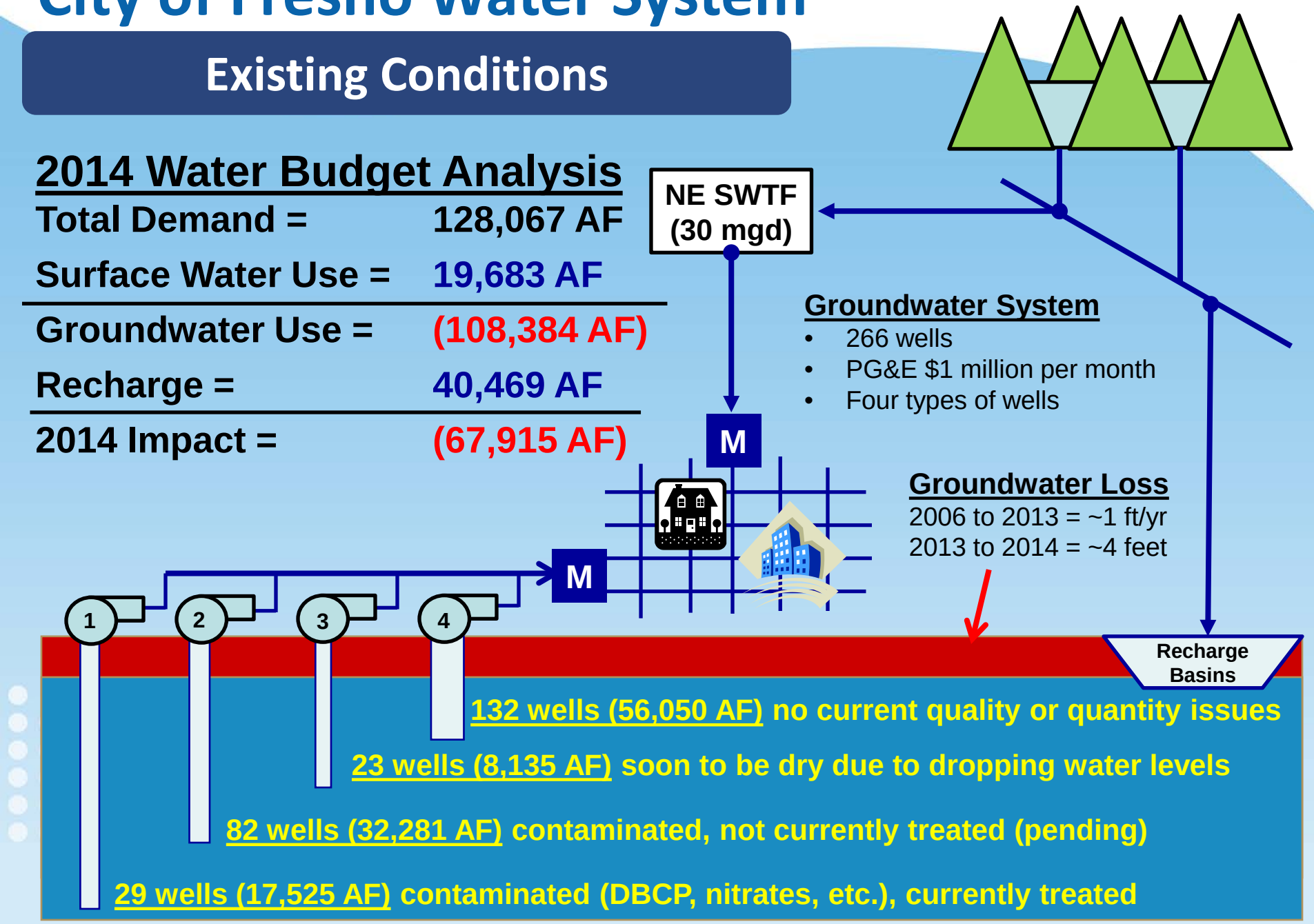

City of Fresno Water System

Future Scenario with SE SWTF

2014 Water Budget Analysis

Total Demand =	128,067 AF
Surface Water Use =	19,683 AF
Groundwater Use =	(108,384 AF)
Recharge =	40,469 AF
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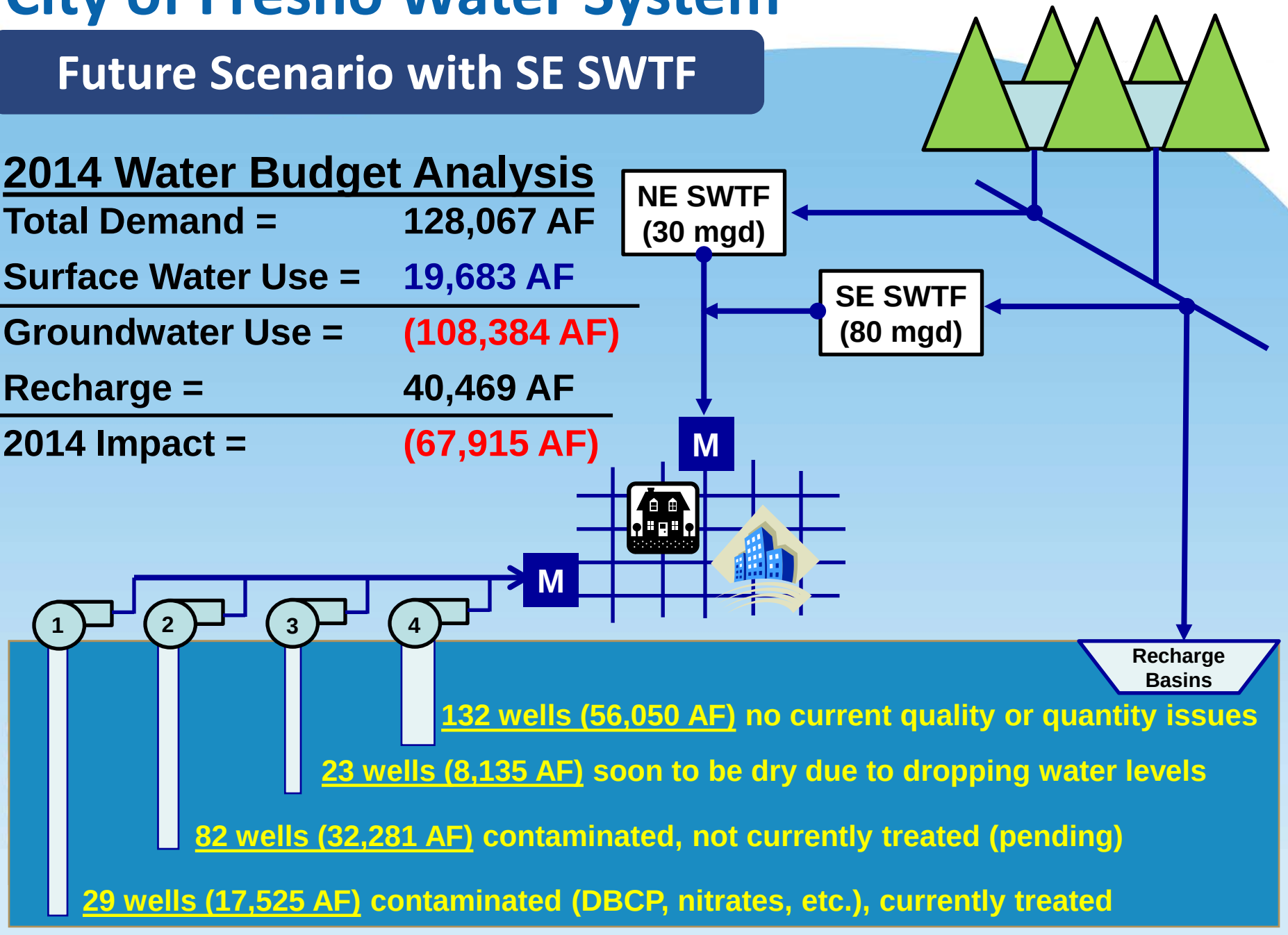
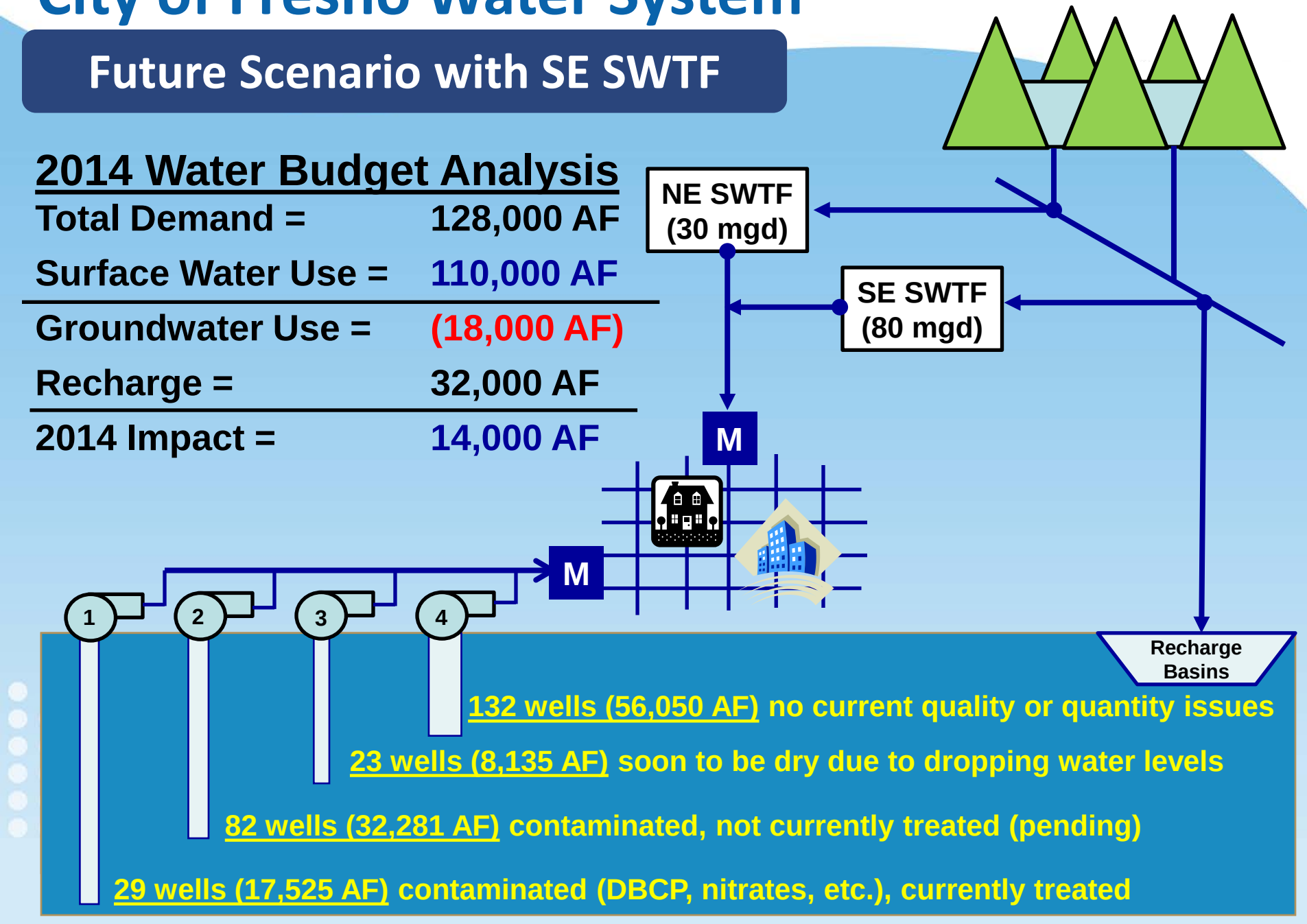


City of Fresno Water System

Future Scenario with SE SWTF

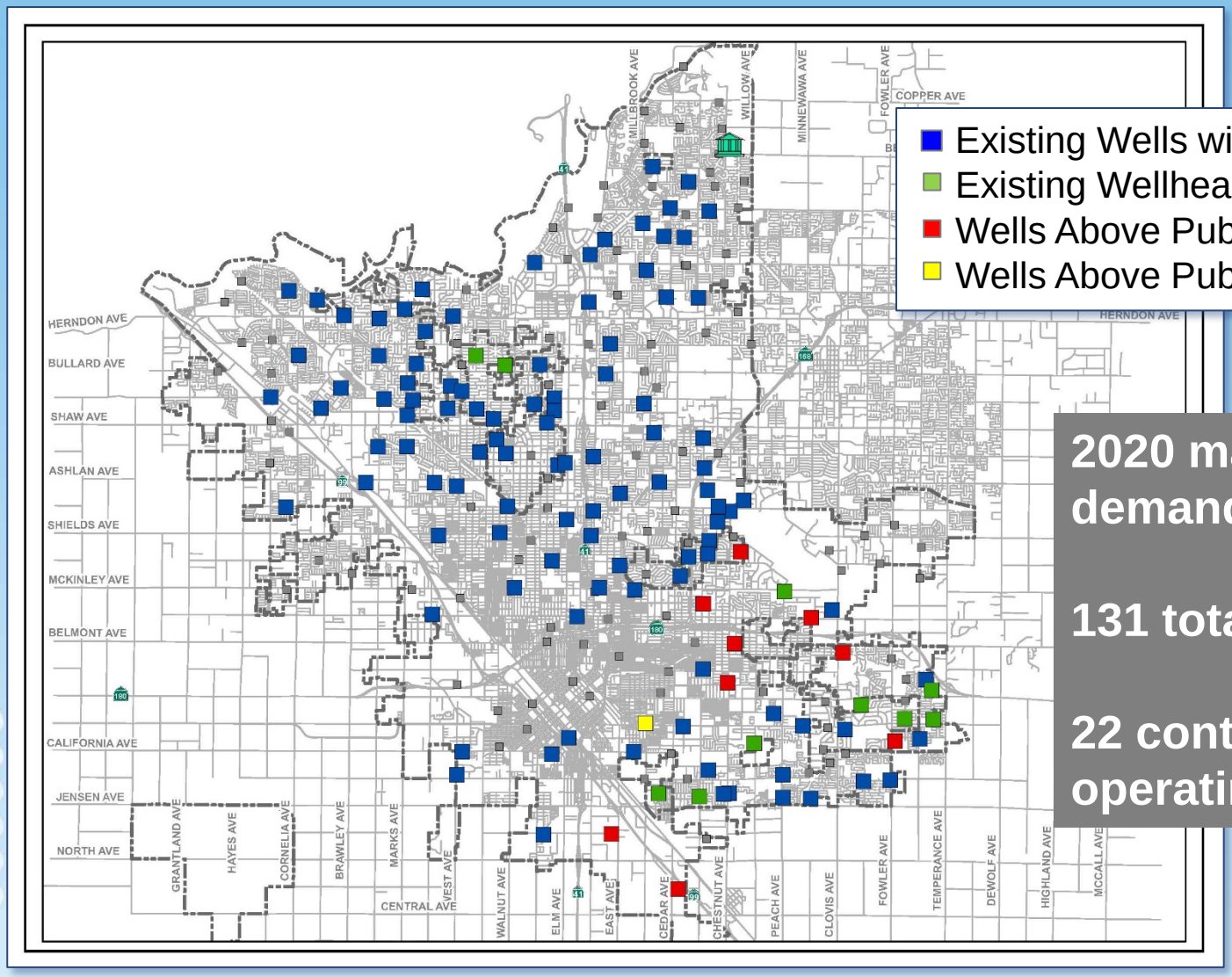
2014 Water Budget Analysis

Total Demand =	128,000 AF
Surface Water Use =	110,000 AF
Groundwater Use =	(18,000 AF)
Recharge =	32,000 AF
2014 Impact =	14,000 AF



Operation without SE SWTF

Water Production with wells and NE SWTF



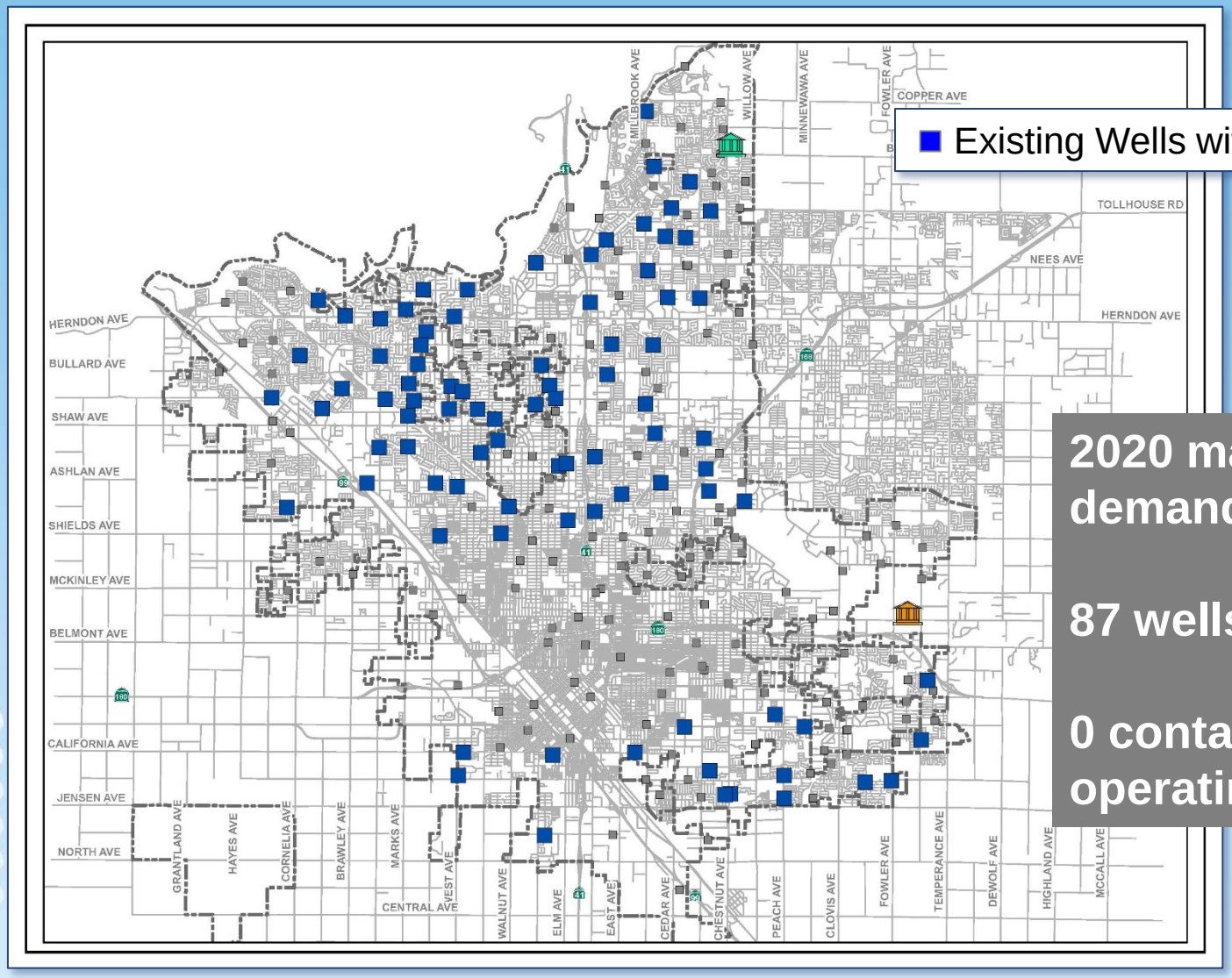
2020 maximum day demand

131 total wells operating

22 contaminated wells operating

Proposed Operation with SE SWTF

Water Production with wells, NE SWTF and proposed SE SWTF



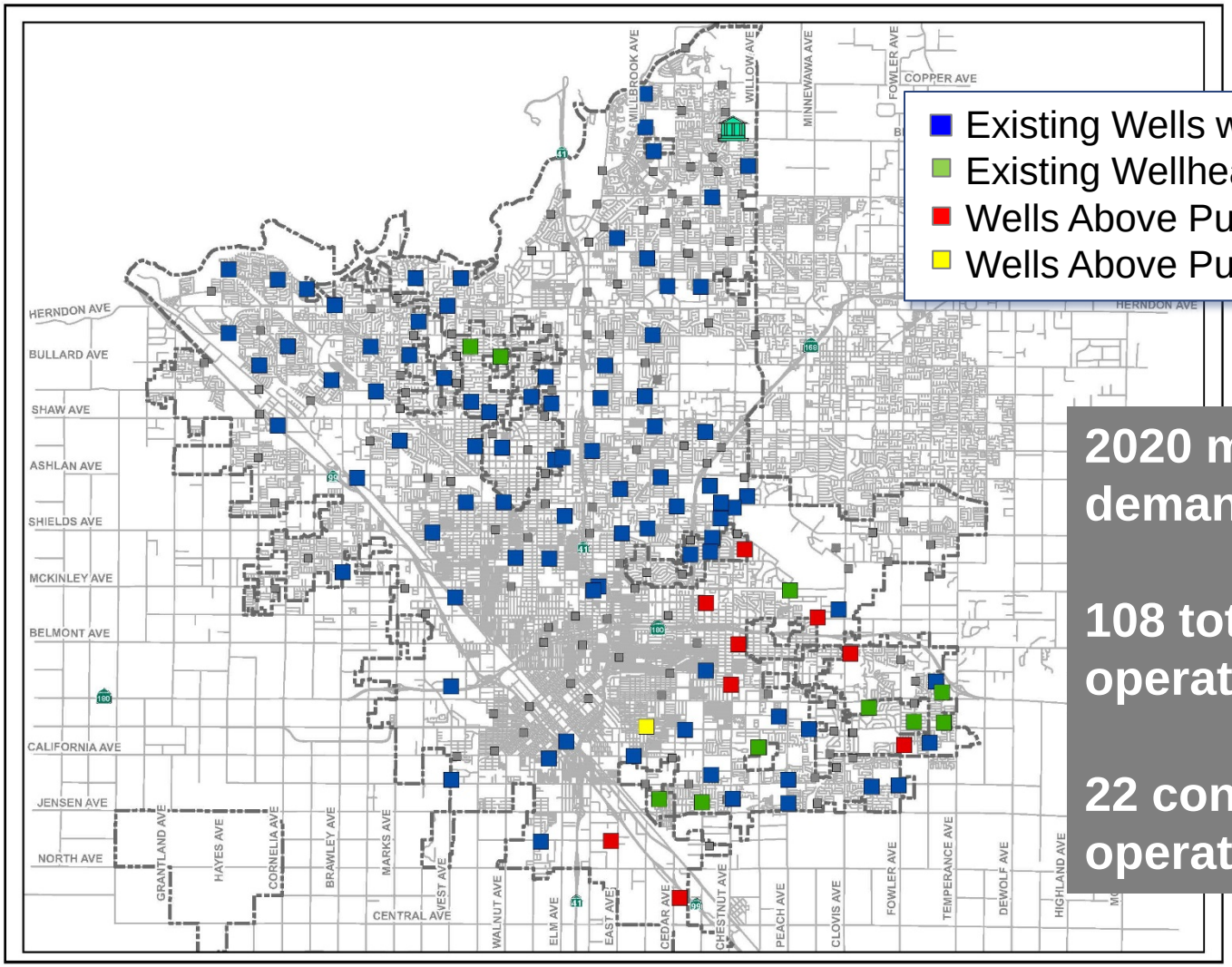
2020 maximum day demand

87 wells operating

0 contaminated wells operating

Expand NE SWTF by 30 mgd only

Water Production with wells and expanded NESWTF



2020 maximum day demand

108 total wells operating

22 contaminated wells operating

Water Balance Simulation

What if the system was already in place?

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Year	Total System Demand (AF)	Surface Water Allocation (AF)	Surface Water Production (AF)	Groundwater Recharge (AF)		Groundwater Demand (AF)		Allocation Not Used (AF)	
				Estimated	Actual	Estimated	Actual	Estimated	Actual
2007	165,762	113,484			38,047		145,110		54,760
2008	168,085	164,299			50,534		148,022		93,676
2009	157,782	152,569			53,865		137,903		78,801
2010	147,020	195,385			53,586		127,409		122,165
2011	140,059	192,470			49,116		119,193		122,467
2012	138,643	114,796			47,774		118,685		47,042
2013	141,614	120,089			47,020		123,547		54,980
					Totals		**919,870**		**573,891**

City of FRESNO
DEPARTMENT OF PUBLIC UTILITIES

Water Balance Simulation

What if the system was already in place?

RECHARGE FRESNO
Securing Our Water Future

Year	Total System Demand (AF)	Surface Water Allocation (AF)	Surface Water Production (AF)	Groundwater Recharge (AF)		Groundwater Demand (AF)		Allocation Not Used (AF)	
				Estimated	Actual	Estimated	Actual	Estimated	Actual
2007	165,762	113,484	110,000	3,484	38,047	55,762	145,110	0	54,760
2008	168,085	164,299	110,000	54,299	50,534	58,085	148,022	0	93,676
2009	157,782	152,569	110,000	42,569	53,865	47,782	137,903	0	78,801
2010	147,020	195,385	110,000	55,000	53,586	37,020	127,409	30,385	122,165
2011	140,059	192,470	110,000	55,000	49,116	30,059	119,193	27,470	122,467
2012	138,643	114,796	110,000	4,796	47,774	28,643	118,685	0	47,042
2013	141,614	120,089	110,000	10,089	47,020	31,614	123,547	0	54,980
					Totals	**288,965**	**919,870**	**57,855**	**573,891**
					Reduction	**69%**		**90%**	

Preserved Groundwater = 630,905 AF
(~5 years of current demand)

City of FRESNO
DEPARTMENT OF PUBLIC UTILITIES

Surface Water Supply Reliability

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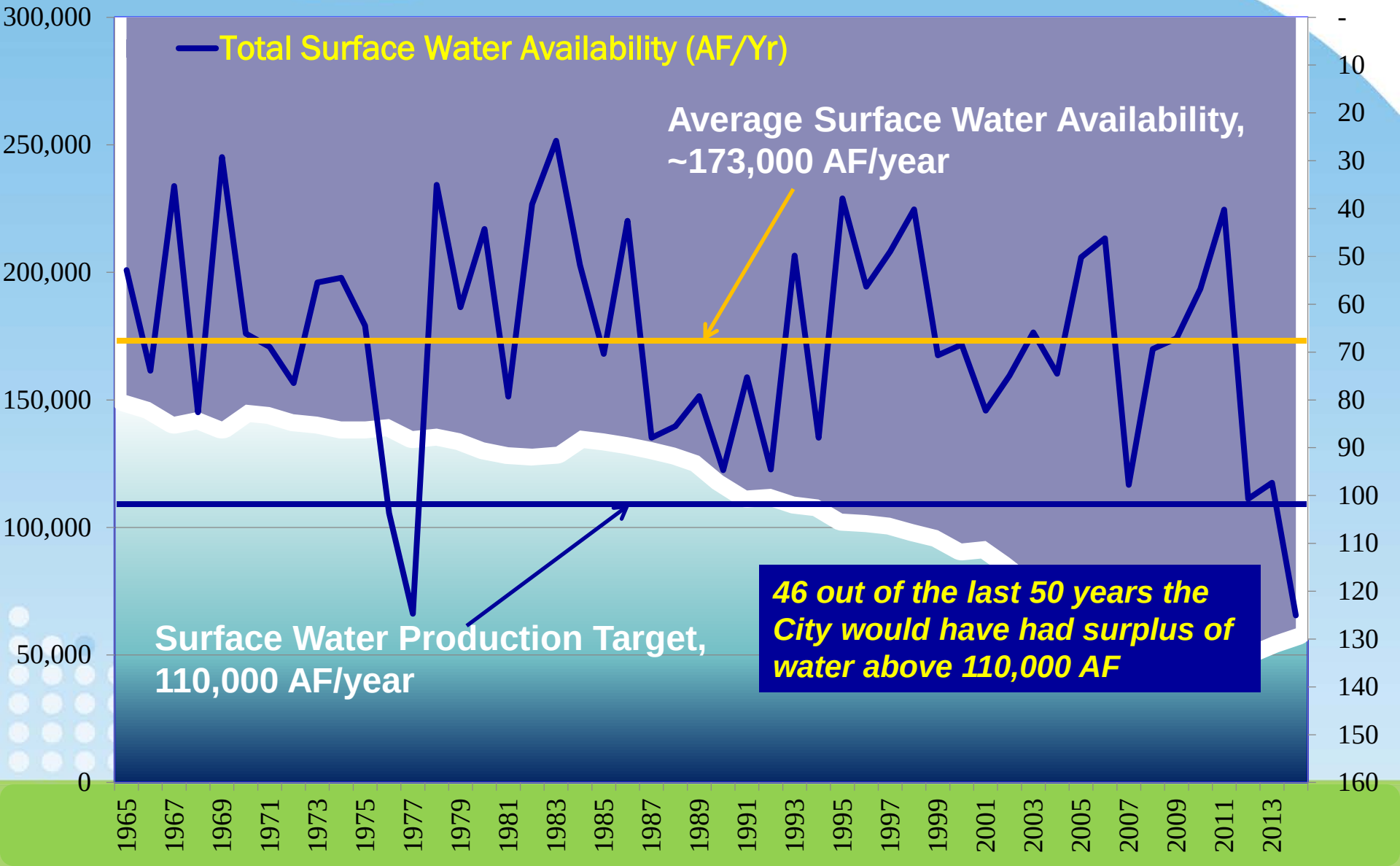

SE SWTF Size Selection

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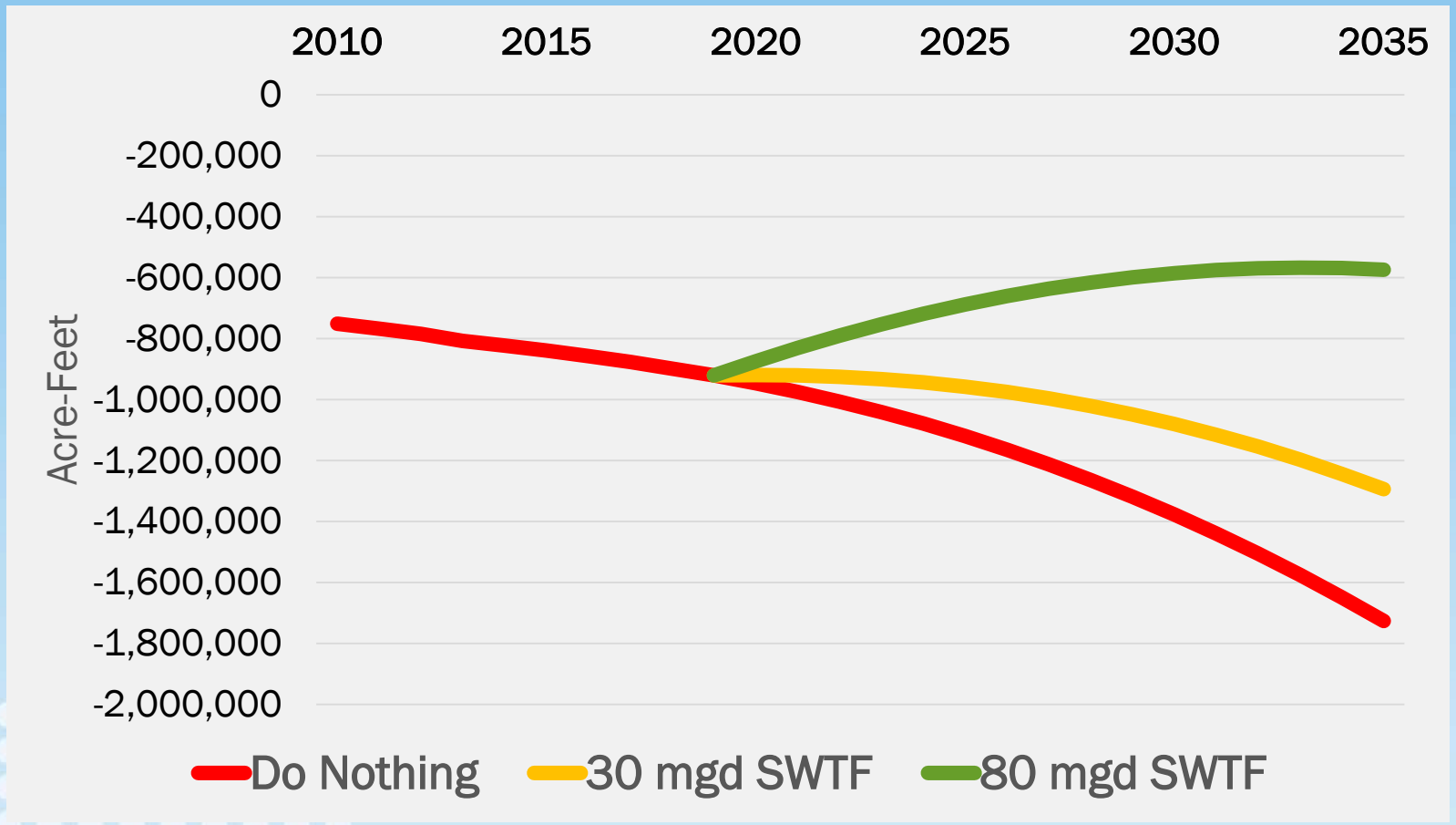
80 MGD appropriately addresses groundwater overdraft



Five-Year Capital Plan

RECHARGE FRESNO
Securing Our Water Future

Summary of Projects and Financing

PROJECTS

Southeast Surface Water Treatment Facility	*$186.4 million*
Raw Water Pipelines	*$ 98.4 million*
Finished Water Pipelines	*$ 55.4 million*
Water System Renewal and Replacement	*$ 82.5 million*
Groundwater Recharge	*$ 6.4 million*

TOTAL = $429.1 million

FINANCING with SRF LOAN

$186.4 million, SRF Loan (1.663%, 30 years)

$154.2 million, Revenue Bonds (5.5%, 30 years)

$88.5 million, Cash (pay-as-you-go)

Water Rate Planning

Monthly Water Bill (18 HCF, 1" service)

Year of Rate Plan	Repealed Plan ($/mo)	Revised Plan ($/mo)
Current	$ 24.49	$ 24.49
Year 1	$ 33.28	$ 27.76
Year 2	$ 41.42	$ 31.92
Year 3	$ 44.70	$ 36.84
Year 4	$ 48.34	$ 42.80
Year 5	$ 52.26	$ 49.22

State Regional Water Quality Control Board Affordability Index

Targeted Consumer Rate for Water Affordability = 1.5% of MHI

MHI for the City of Fresno, $42,015 (2009-2013, US Census Bureau)

Affordable Monthly Water Bill = **$52.52 per month**.

New Rate Plan Promotes Conservation

- 2013 Average Consumption, SFR = ~24 HCF
- 2014 Average Consumption, SFR = ~21.7 HCF
- 2019 Forecasted Average Consumption, SFR ~16.5 HCF (24% additional conservation)

	Current	Revised Plan (5th year)
Total Water Bill	$ 24.49	$ 49.22
Meter Charge (1-inch meter)	$ 13.51	$ 17.90
Consumption Charge (18 HCF)	$ 10.98	$ 31.32
Meter Charge Allocation	55.2 %	36.4 %
Consumption Charge Allocation	44.8 %	63.6 %

Water Rate Planning

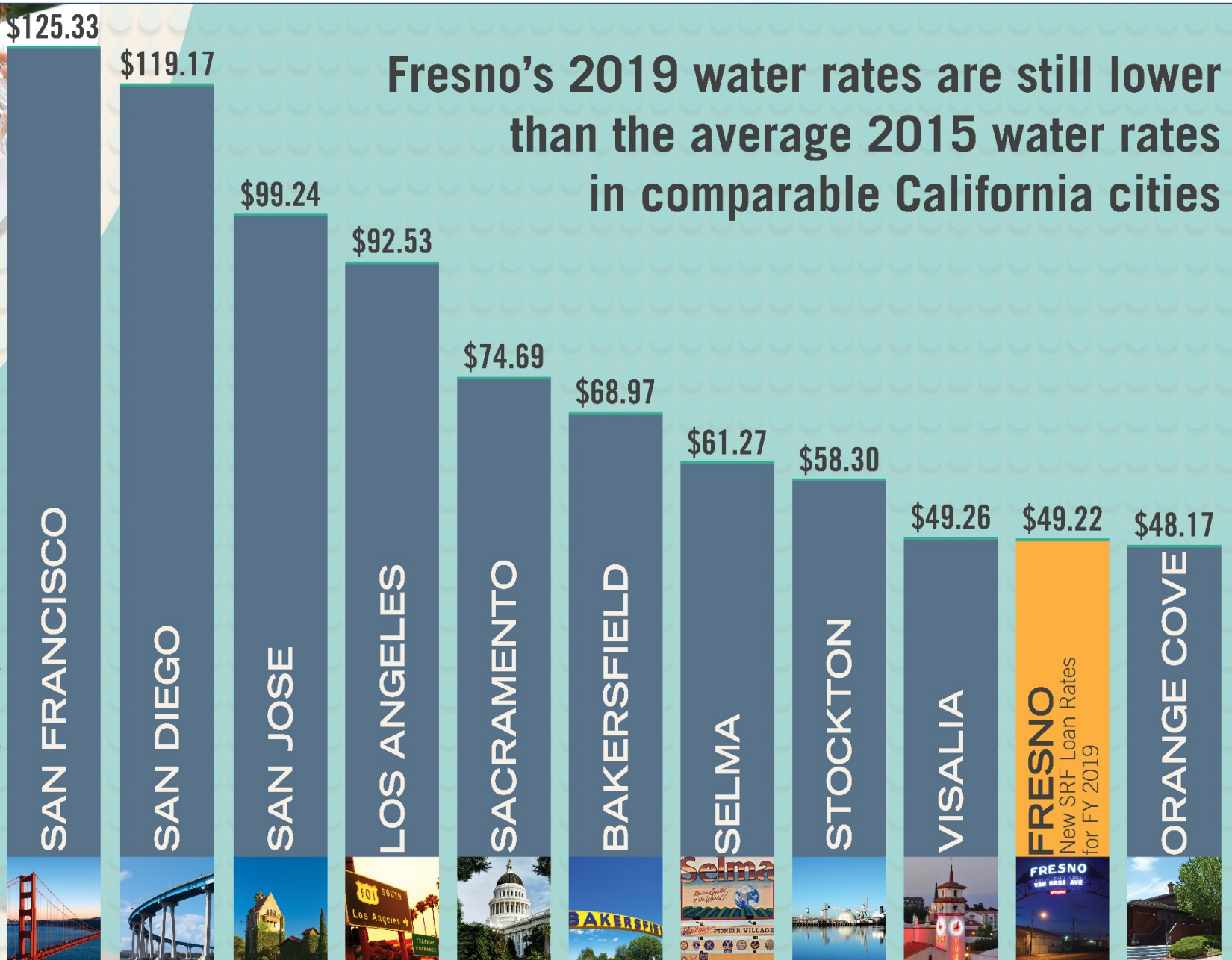
Monthly Water Bill with Conservation

Year of Rate Plan	Revised Plan ($/mo)	Revised Plan ($/mo) with Conservation
Current	$ 24.49	$ 24.49
Year 1	$ 27.76	$ 25.51
Year 2	$ 31.92	$ 28.00
Year 3	$ 36.84	$ 32.23
Year 4	$ 42.80	$ 37.40
Year 5	$ 49.22	$ 42.96

with 20% conservation in water use

Rate Comparison

Fresno's 2019 water rates are still lower than the average 2015 water rates in comparable California cities



The rates apply to 100 Cubic Feet = 1 HCF = 748 gallons
Source: CityWater Utility Websites

Utility Bill Impact

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CURRENT RATES

Billing Summary		
		$81.90
Previous Balance		
Payments		**$81.90**
Adjustments		**$0.00**
Balance Forward		**$0.00**
Total SOLID WASTE Charges		**25.37**
96 gal Cont	25.37	
Total SANITATION Charges		**6.23**
Sanitation	6.23	
Total SEWER NON-METERED Charges		**25.81**
Pretrtmnt – Residntl	0.06	
Residential Sewer	25.75	
Total WATER – Metered Charges		**24.49**
Standby Charge	13.51	
Consumption	10.98	
Current Charges		**$81.90**
TOTAL AMOUNT DUE		**$81.90**

REVISED RATES

Billing Summary		
		$106.63
Previous Balance		
Payments		**$106.63**
Adjustments		**$0.00**
Balance Forward		**$0.00**
Total SOLID WASTE Charges		**25.37**
64 gal Cont	25.37	
Total SANITATION Charges		**6.23**
Sanitation	6.23	
Total SEWER NON-METERED Charges		**25.81**
Pretrtmnt – Residntl	0.06	
Residential Sewer	25.75	
Total WATER – Metered Charges		**49.22**
Monthly Meter Charge	17.90	
Consumption	31.32	
Current Charges		**$106.63**
TOTAL AMOUNT DUE		**$106.63**

30% Increase

City of FRESNO
DEPARTMENT OF PUBLIC UTILITIES

2011 UAC Rate Plan vs Proposed 2015 Plan

Utility Service	Current	Year 1	Year 2	Year 3	Year 4	Year 5
Current Plan						
Water (1-inch, 18 HCF)	$ 24.49	$ 27.76	$ 31.92	$ 36.84	$ 42.80	$ 49.22
Sewer	$ 25.81	$ 25.81	$ 25.81	$ 25.81	$ 25.81	$ 25.81
Solid Waste (96 gallon can)	$ 25.37	$ 25.37	$ 25.37	$ 25.37	$ 25.37	$ 25.37
Community Sanitation	$ 6.23	$ 6.23	$ 6.23	$ 6.23	$ 6.23	$ 6.23
TOTAL Utility Bill Costs	$ 81.90	$ 85.17	$ 89.33	$ 94.25	$ 100.21	$ 106.63
2011 UAC Recommendations						
Water (1-inch, 18 HCF)	$ 24.49	$ 31.81	$ 36.40	$ 37.98	$ 39.62	$ 41.35
Sewer	$ 25.81	$ 26.39	$ 27.05	$ 27.73	$ 28.42	$ 29.13
Solid Waste (96 gallon can)	$ 25.37	$ 24.61	$ 23.87	$ 23.15	$ 22.46	$ 21.79
Community Sanitation	$ 6.23	$ 6.23	$ 6.23	$ 6.23	$ 6.23	$ 6.23
TOTAL Utility Bill Costs	$ 81.90	$ 89.04	$ 93.55	$ 95.09	$ 96.73	$ 98.50

Affordability Credit Plan

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Securing Our Water Future

Proposed ACP Impact on Monthly Water Service Bills (18 HCF/month)	
Monthly Water Bill Cost (18 HCF per month, current rates)	$24.49
Monthly Water Bill Cost (18 HCF per month, 1st twelve months)	$30.45
Monthly Water Bill Impact (18 HCF per month, 1st twelve months)	$5.96

Affordability Credit Plan

RECHARGE FRESNO
Securing Our Water Future

Proposed ACP Impact on Monthly Water Service Bills (18 HCF/month)	
Monthly Water Bill Cost (18 HCF per month, current rates)	$24.49
Monthly Water Bill Cost (18 HCF per month, 1st twelve months)	$30.45
Monthly Water Bill Impact (18 HCF per month, 1st twelve months)	$5.96
Water Affordability Credit	($5.00)
Net Monthly Water Bill Impact (18 HCF per month, 1st twelve months)	$0.96

Major Project Schedules

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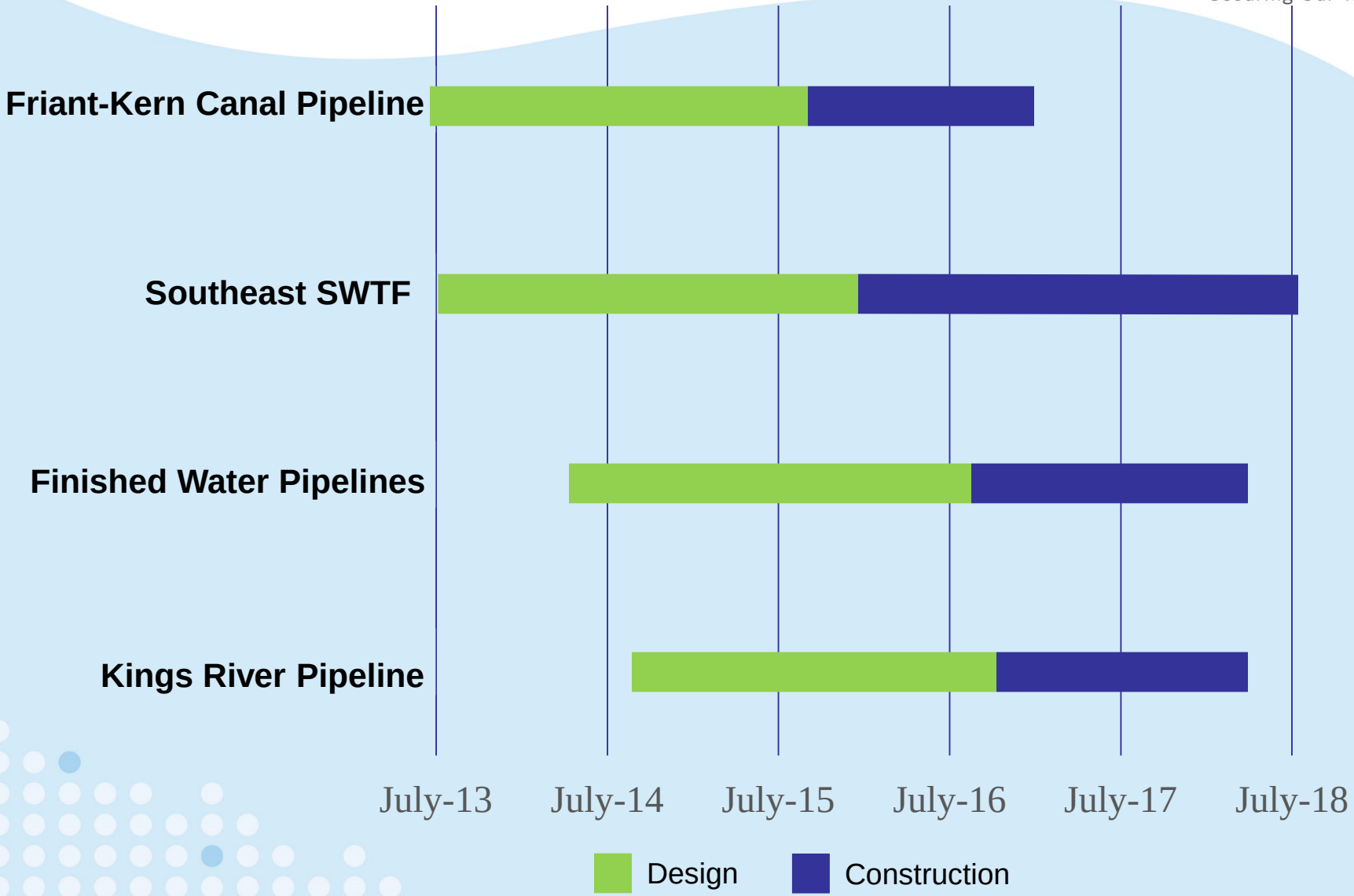
Securing Our Water Future



Summary – Next Steps

Feb 26, 2015 — 5-year rate proposal, incorporating loan savings, presented to *(and adopted by)* City Council

Mar 5 2015
- Council authorizes applications for additional $155 M State funding

Mar 30 2015
- Bills include new rates

May/June 2015
- Council approves SE SWTF loan agreement
- Council receives tentative loan agreement for pipeline projects

July 2015
- Qualified low-income residents begin receiving Water Affordability Credit
- Construction bids solicited for SE SWTF

Oct/Nov 2015
- Council awards construction contract

Start-up and Re-rating of SESWTF

Sept/Oct 2018 — Complete construction of SESWTF with a permitted capacity of 54 mgd

Oct 2018 – Mar 2019 — Six month demonstration of superior performance at 54 mgd

Mar 2019 – May 2019 — Operate one filter set at higher rate of 80 mgd

June 2019 — Start 12-month demonstration test to rerate SE SWTF to 80 mgd

Jan 2020 — City of Fresno managed under a **Groundwater Sustainability Plan** with 80 mgd SE SWTF as foundation

June 2020 — Complete 12-month demonstration test for 80 mgd

July 2020 — Receive new operating permit for SE SWTF at 80 mgd

What We Heard Since July 31, 2014

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Securing Our Water Future

- Water affordability and equity are important.
- New development should pay its fair share of program costs.
- What happens if we don't advance the capital plan and rate plan (What is Plan B)?
- The City has credibility issues (delivery of projects, transparency, compliance with adopted plans).
- What is the reliability of the City's surface water entitlements?
- What happens if we get additional financial support from the State of CA?
- Are we certain that the Recharge Fresno plan will meet the State's requirements in the Sustainable Groundwater Management Act?
- What is the status of the Conveyance Agreement?

Long-Range Vision

RECHARGE FRESNO
Securing Our Water Future

- Safe and Reliable Water System
- Sustainable and Resilient Water Supply
- Equitable and Affordable Rate Plan

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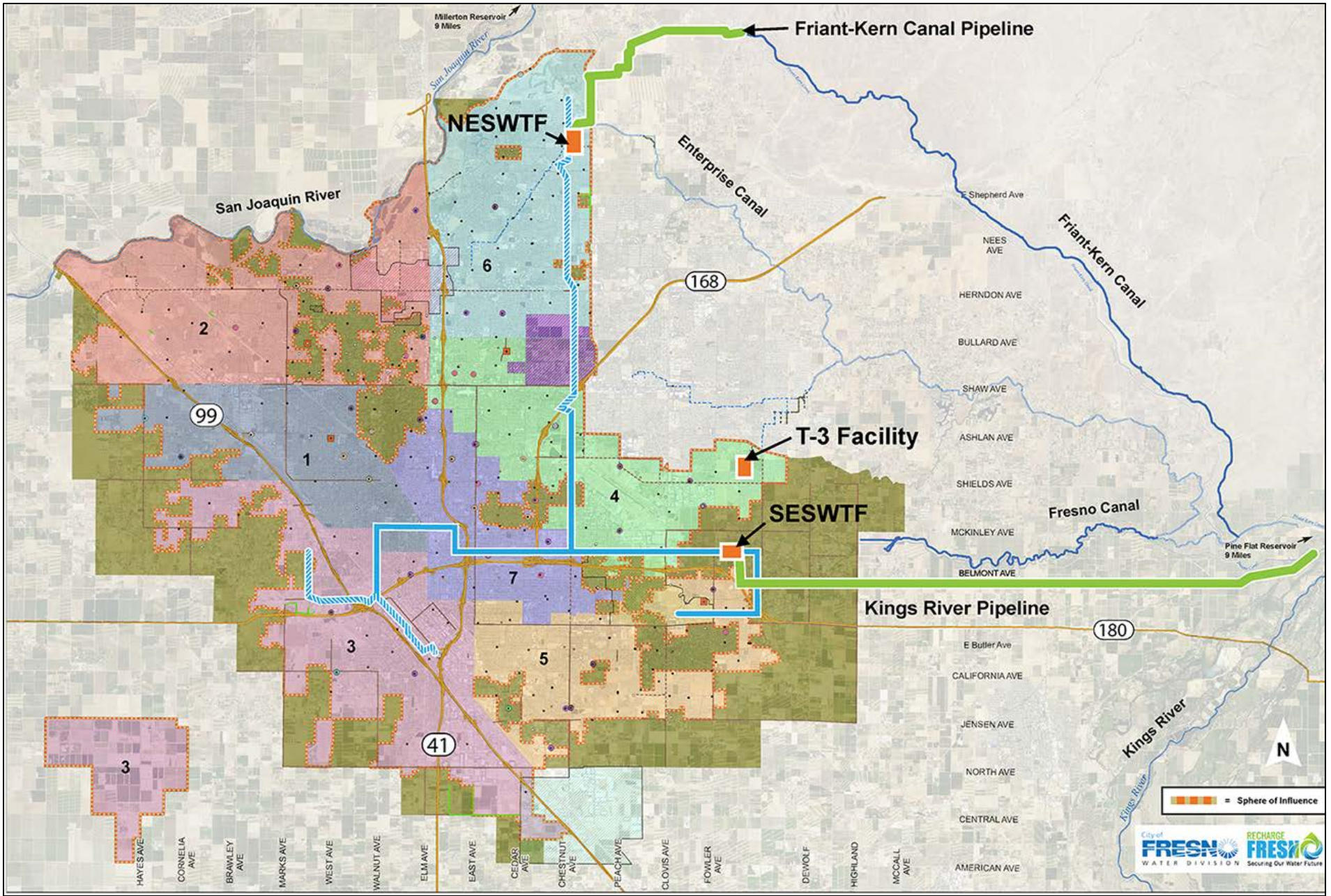
Questions

City of FRESNO
DEPARTMENT OF PUBLIC UTILITIES

Recharge Fresno Projects



Expand NE SWTF by 30 mgd only

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