

Why  
increase  
rates?





## Notice

An algae bloom has made this area potentially unsafe for water contact. Avoid direct contact with visible surface scum.



## ADVISORY

Blue-green algal blooms have been observed in this area.

If a bloom **IS** present:



Do not swim



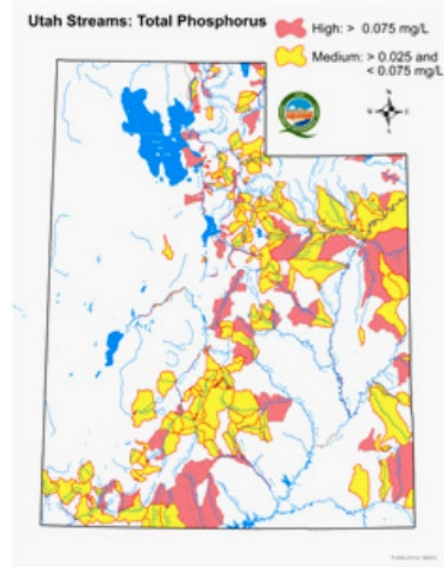
Do not drink the water



Do not allow pets in the water

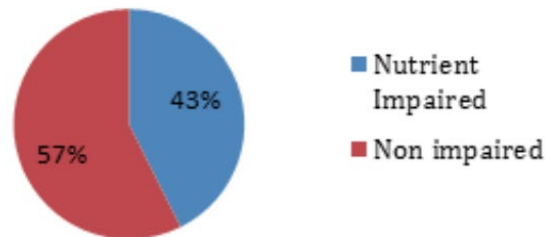
may be

# NEW PHOSPHORUS LIMIT



**June 2014**

## Utah Lakes and Reservoirs (total acres)



■ Nutrient  
Impaired  
■ Non impaired

## Phosphorus Rule Highlights

Under the proposed rule, all wastewater treatment plants will play a role in reducing phosphorus discharges into state waters.

- Mechanical plants will be required to produce treated wastewater that contains 1.0 mg/L or less before that water can be discharged.

# Compliance Schedule with State DWQ

## 3. Compliance Schedule for Ammonia

### a. Total Ammonia Compliance Schedule:

Date	Milestone
September 1, 2022	SDSD shall commence the design of Phase 1
December 31, 2022	SDSD submits a completed capital facilities plan revision consistent with SRF requirements, which will include Phase 1 and options for Phase 2

- 7 -

## PART I DISCHARGE PERMIT NO. UT0021636 WASTEWATER

September 1, 2023	SDSD submits detailed construction plans and specifications to DWQ to obtain a construction permit for Phase 1
December 1, 2023	SDSD obtains construction permit
January 31, 2024	SDSD bids construction of approved wastewater treatment upgrades as outlined in the DWQ construction permit
August 1, 2026	SDSD shall complete construction of the upgrades and begin startup and optimization of upgraded wastewater treatment upgrades
September 1, 2026	Final ammonia effluent limits will into effect, and mass-based ammonia limit will no longer apply

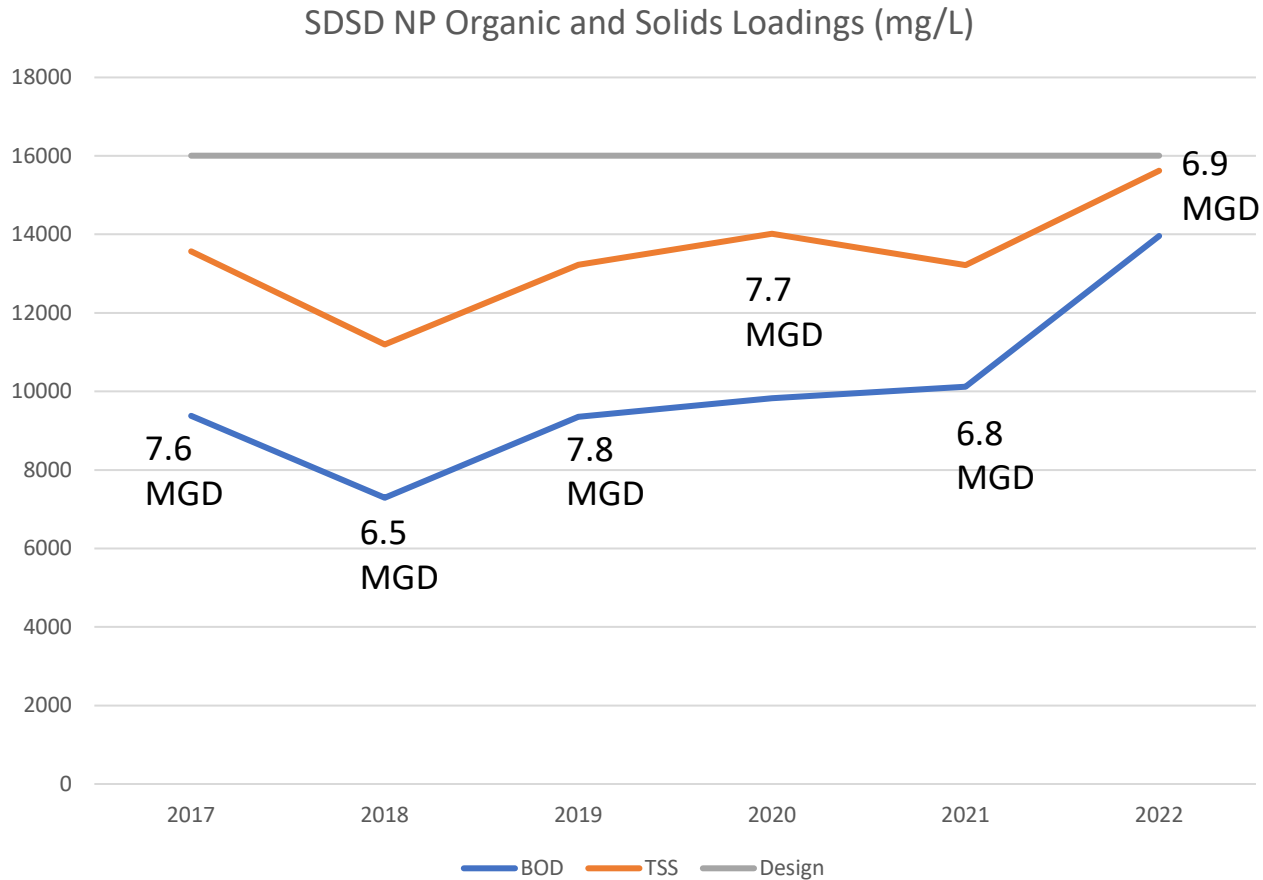


# Reduced Ammonia Limits:

- Old average monthly permit was 11.5 mg/L (different each season)
  - Lowest daily max limit was 16.2 in the Fall
- New average monthly permit is 6.4 mg/L (different each season, lowest is 5.5 mg/L)
  - Lowest Daily max limit is now 13.0 mg/L in the WINTER.
- The Districts North Treatment Plant **trickling filters** cannot meet these numbers without new treatment.



# Solids Treatment Capacity:



\*Plus, Existing Digesters are over 60 years old, not sure of their structural integrity.



# SDSD Timeline

- New Phosphorus Rule: 2014 (Effective 2020)
- New Ammonia Reductions: 2019 and 2026
- Planning 2014
- South Plant Engineering 2015-2020
- South Plant Construction 2020-2023
- North Plant Engineering 2022-2023
- North Plant Construction 2024-2026
- Bond for South Plant Improvements: 2019: \$12M @ 2.1%
- Bond for South Plant Improvements: 2021: \$10M @ 2.05%
- More funding 2024: ultimately ~\$60M
- Total annual likely Debt Service: ~\$6.5M (around \$150 annually or \$12.50 monthly per connection)



# Cost of Operating treatment plants with inflation and lower limits (...so far)

COST OF OPERATING: TREATMENT				Cost Per Equivalent Dwelling Unit			
Line item	YEAR		% Increase		YEAR		% Increase
	2017	2022			2017	2022	
Salaries	\$ 803,583	\$ 1,129,464	41%		\$ 19.07	\$ 24.91	31%
Employee Benefits	385,483	582,674	51%		\$ 9.15	\$ 12.85	40%
Operations	205,921	572,382	178%		\$ 4.89	\$ 12.62	158%
Chemicals	452,887	1,321,349	192%		\$ 10.75	\$ 29.14	171%
Transportation	19,623	75,624	285%		\$ 0.47	\$ 1.67	258%
Solids	30,300	48,630	60%		\$ 0.72	\$ 1.07	49%
Power	272,645	369,814	36%		\$ 6.47	\$ 8.16	26%
Natural Gas	26,080	41,178	58%		\$ 0.62	\$ 0.91	47%
Outside Services	113,437	117,063	3%		\$ 2.69	\$ 2.58	-4%
Laboratory	140,034	203,314	45%		\$ 3.32	\$ 4.48	35%
Buildings & Grounds	29,923	32,598	9%		\$ 0.71	\$ 0.72	1%
Insurance & Bonds	50,040	77,071	54%		\$ 1.19	\$ 1.70	43%
<b>TOTAL ANNUAL OPS EXPENSES</b>	<b>\$ 2,529,956</b>	<b>\$ 4,571,162</b>	<b>81%</b>		<b>\$ 60</b>	<b>\$ 101</b>	<b>68%</b>
				Monthly:	<b>\$ 5.00</b>	<b>\$ 8.40</b>	
				EDU's:	42,136	45,339	



■  
Are we crazy?

SDSD Performance

Benchmarking:

How do we stack up  
against our peers?

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# SDSD Performance Metrics:

## Compared to AWWA Benchmarking



**American Water Works  
Association**

<b>SDSD Performance Benchmarking</b>			<b>Percentile: Wastewater</b>		
<b>Metric</b>	<b>SDSD Score</b>	<b>SDSD Quartile</b>	<b>75th</b>	<b>Median</b>	<b>25th</b>
MGD wastewater Processed per Employee(FTE)	0.33	1st	0.22	0.17	0.14
<b>FTE's at 10 MGD:</b>	<b>30</b>	<b>1st</b>	<b>45</b>	<b>59</b>	<b>71</b>
Noncapacity Overflow Events per 100 miles of pipe	0.52	1st	0.7	2.1	3.1
Capacity Overflow Events per 100 miles of pipe	0	1st	0	1.6	4.9
Aggregate Total Cost per Account	\$ 300	1st	\$ 306	\$ 413	\$ 584
Aggregate Total Cost per MG	\$ 2,354	2nd	\$ 1,550	\$ 3,302	\$ 5,525
Aggregate Total Treatment Cost per MG	\$ 1,021	2nd	\$ 955	\$ 1,379	\$ 2,351
Aggregate Total Cost per 100 Miles of Pipe	\$ 2,255,045	1st	\$ 2,256,657	\$ 4,118,490	\$ 7,285,853
Aggregate Total Collection Cost per 100 Miles of Pipe	\$ 586,089	1st	\$ 829,099	\$ 1,072,227	\$ 1,193,857
Aggregate Debt Ratio-Wastewater	27%	1st	38%	44%	65%
Aggregate Debt Ratio-Wastewater (after NP Project)	51%	3rd	38%	44%	65%

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Are we crazy?

SDSD Service Charge  
Benchmarking:

How do we stack up  
against our peers?

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# Recent and Current Wasatch Front Wastewater Upgrades

• Salt Lake City	\$700 Million	Now \$900 Million
• Central Valley Water Reclamation Facility	\$250 Million	
• Provo	\$150 Million	
• Central Weber Sewer Improvement District	\$120 Million	another \$80 Million
• North Davis Sewer District	\$120 Million	another \$70 Million
• Snyderville Basin Water Reclamation District	\$50 Million	
• Jordan Basin Water Reclamation Facility	\$150 Million	another \$50 Million
• Salem City	\$20 Million	
• Payson City	\$17 Million	another \$70 Million
• Logan City	\$150 Million	
• <b>Timpanogos Special service District</b>	<b>\$900 Million</b>	
• <i>South Davis Sewer (North and South Plants)</i>	<i>\$75 Million</i>	
• <b>Wasatch Front total Wastewater Upgrades to date:</b>	<b>&gt;\$3 Billion</b>	

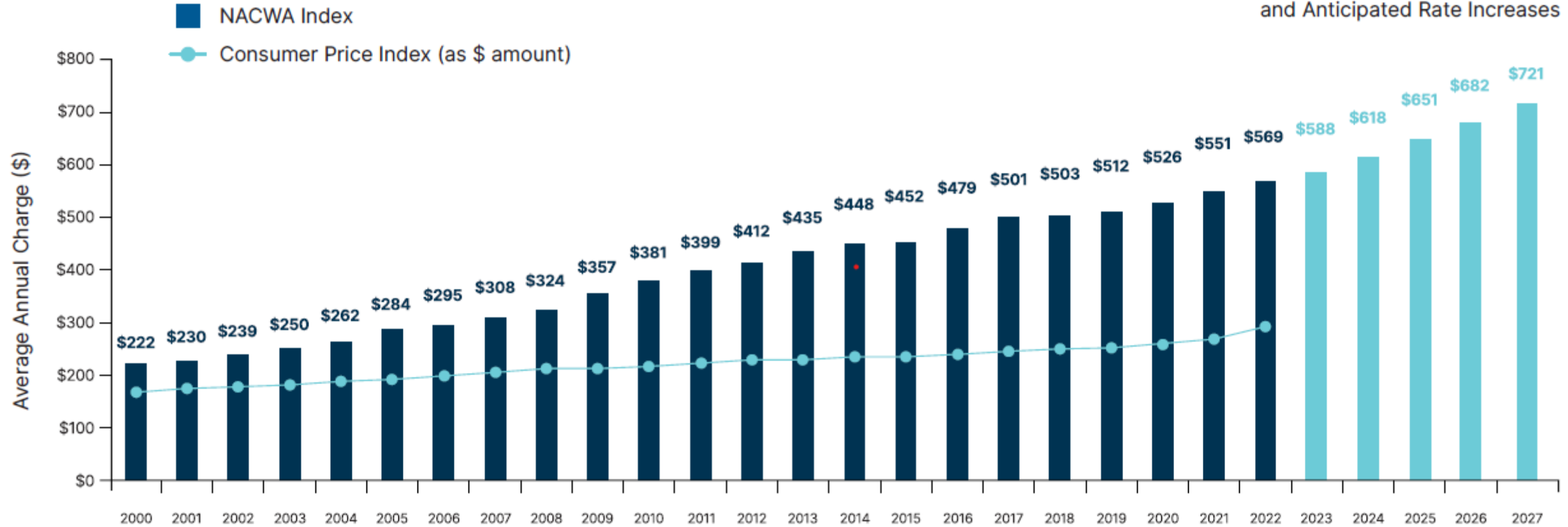
- NOTE: THESE ARE CAPITAL COSTS ONLY. DOES NOT CONSIDER COST OF OPERATION

# Average Annual Service Charge

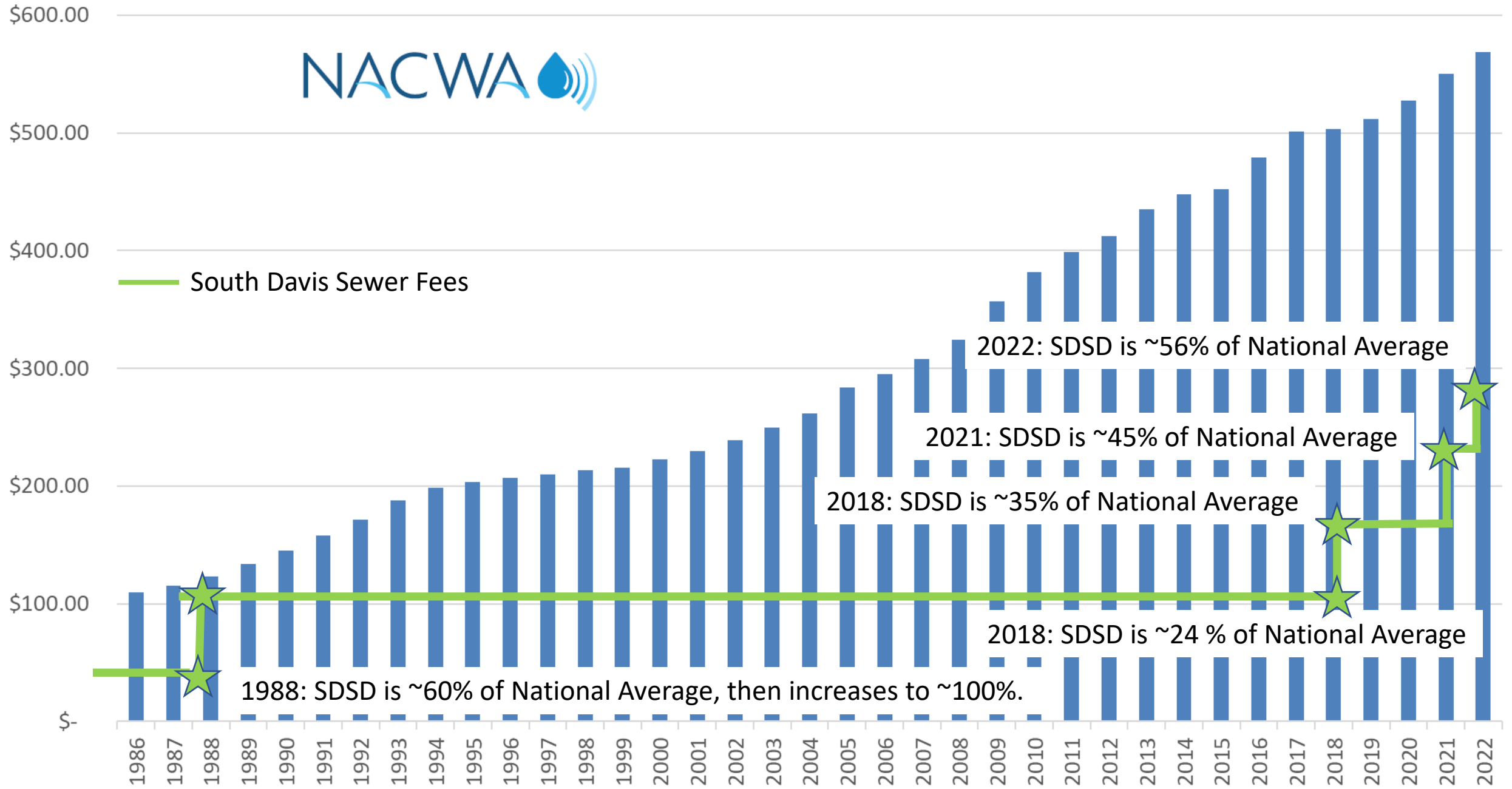
2000 – 2022 & Projected



2023 to 2027 Projected Service Charge Changes Based on Approved and Anticipated Rate Increases

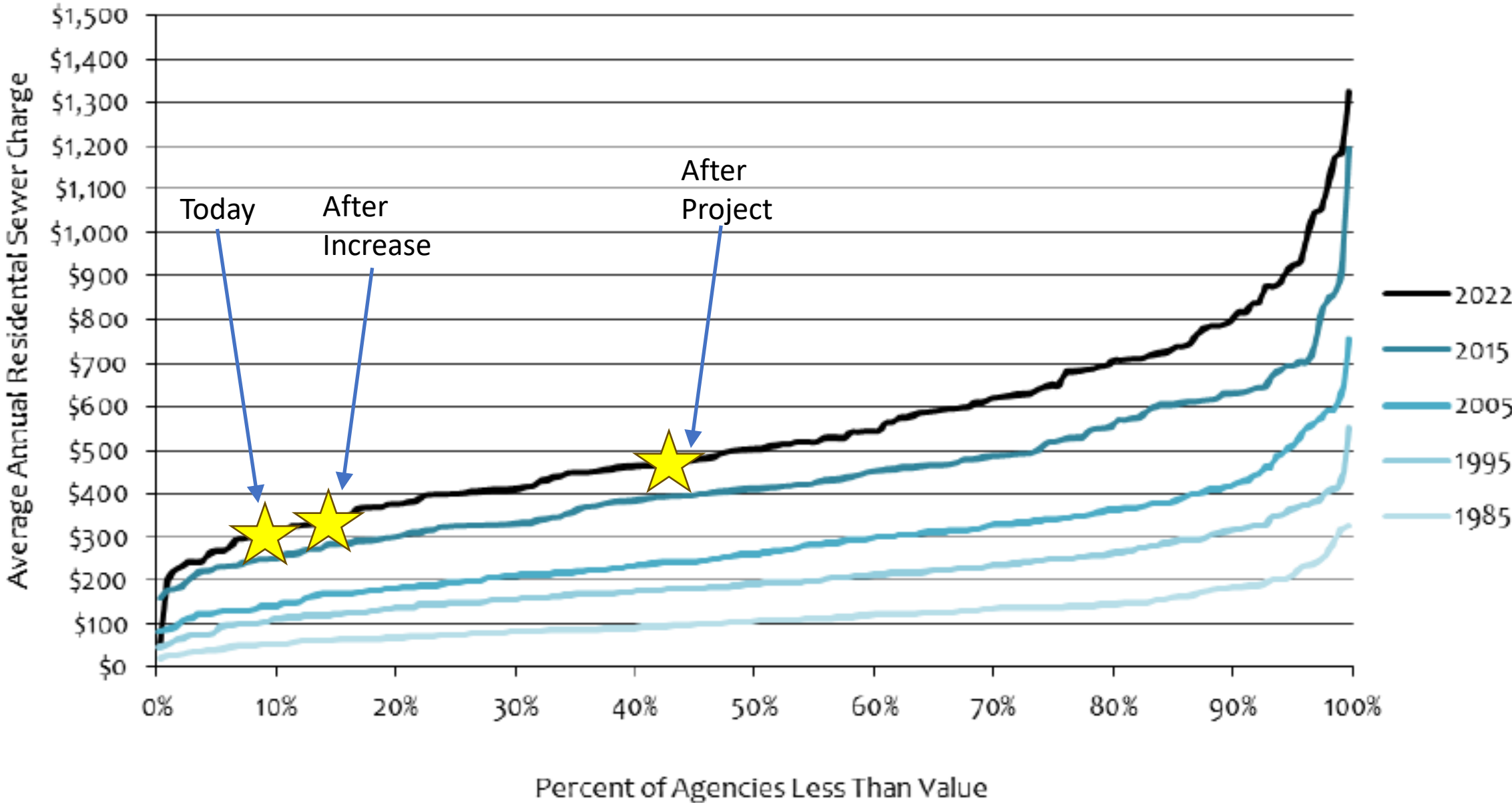


# National Average Annual Sewer Charge





# Distribution Trend of Average Annual Residential Sewer Charge (National)



Name Entity	Total Rate Monthly
Cedar City	\$ 23.01
Cottonwood Improvement District	\$ 23.71
Mt. Olympus Imp. Dist.	\$ 26.10
South Davis Sewer District	\$ 26.39
Utah County Side of Draper	\$ 26.65
Sandy Suburban Improvement District	\$ 27.36
Tooele	\$ 28.39
St George City	\$ 28.75
Central Davis Sewer District	\$ 29.35
South Davis Sewer District-TAX INCREASE	\$ 30.16
South Valley Sewer District-includes parts of Draper	\$ 30.43
Kaysville	\$ 30.47
Fruit Heights	\$ 30.52
Farmington	\$ 31.30
Orem	\$ 32.87
North Davis Sewer District	\$ 33.30
Tremonton City	\$ 33.80
Brigham City	\$ 35.00
Springville	\$ 35.48
Price River WID*	\$ 35.77
Riverdale	\$ 35.82
Clinton	\$ 36.25
Lehi	\$ 36.48
Logan City	\$ 36.51
Sunset	\$ 37.11
Roy	\$ 37.17
Alpine	\$ 38.04
Farr West City	\$ 38.64
West Point	\$ 38.90

Name Entity	Total Rate Monthly
West Jordan	\$ 39.16
Layton	\$ 39.85
Highland	\$ 39.92
Syracuse	\$ 40.14
Midvalley Improvement District	\$ 40.63
Central Weber Sewer Improvement District	\$ 40.75
Pleasantview	\$ 41.32
Kearns Improvement District	\$ 41.80
Roy City	\$ 42.98
Ogden City	\$ 43.41
Clearfield	\$ 43.44
Granger-Hunter Improvement District	\$ 44.07
Pleasant Grove	\$ 45.11
Vineyard	\$ 45.25
Eagle Mountain	\$ 45.75
Midvale	\$ 45.96
South Weber City	\$ 46.22
Taylorsville-Bennion Improvement District	\$ 46.63
Santaquin	\$ 46.67
American Fork	\$ 46.75
Cedar Hills	\$ 46.91
West Haven	\$ 46.93
Magna Water Co.	\$ 47.13
Washington Terrace	\$ 47.79
Spanish Fork	\$ 48.46
South Ogden City	\$ 48.48
Saratoga Springs	\$ 50.08
Snyderville Basin Water Reclamation District	\$ 51.29
North Ogden City	\$ 51.98
Payson	\$ 61.56

Name Entity	Total Rate Monthly
Murray	\$ 62.14
Hooper	\$ 62.81
Salt Lake City	\$ 63.10
Provo	\$ 65.70
South Salt Lake	\$ 80.00

