

2021 Service Charge Rates and Septage Rates

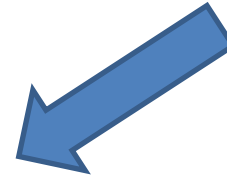
October 29, 2020



An Overview

We set rates:

$$\text{Rate} = \frac{\text{Budgeted Service Charges, \$}}{\text{Estimated load, lbs}}$$



So that when billed: Actual Load x Rate = Required Revenue



An Overview

Rate Setting Outcomes

- **Collect the budgeted revenue**
- **Apportion costs to billing parameters**
- **Provide rates and estimated charges to customer communities.**



Overview cont.



7 billing parameters ➡ **7 loads**
7 rates

Volume

CBOD

Suspended solids

Nitrogen

Phosphorus

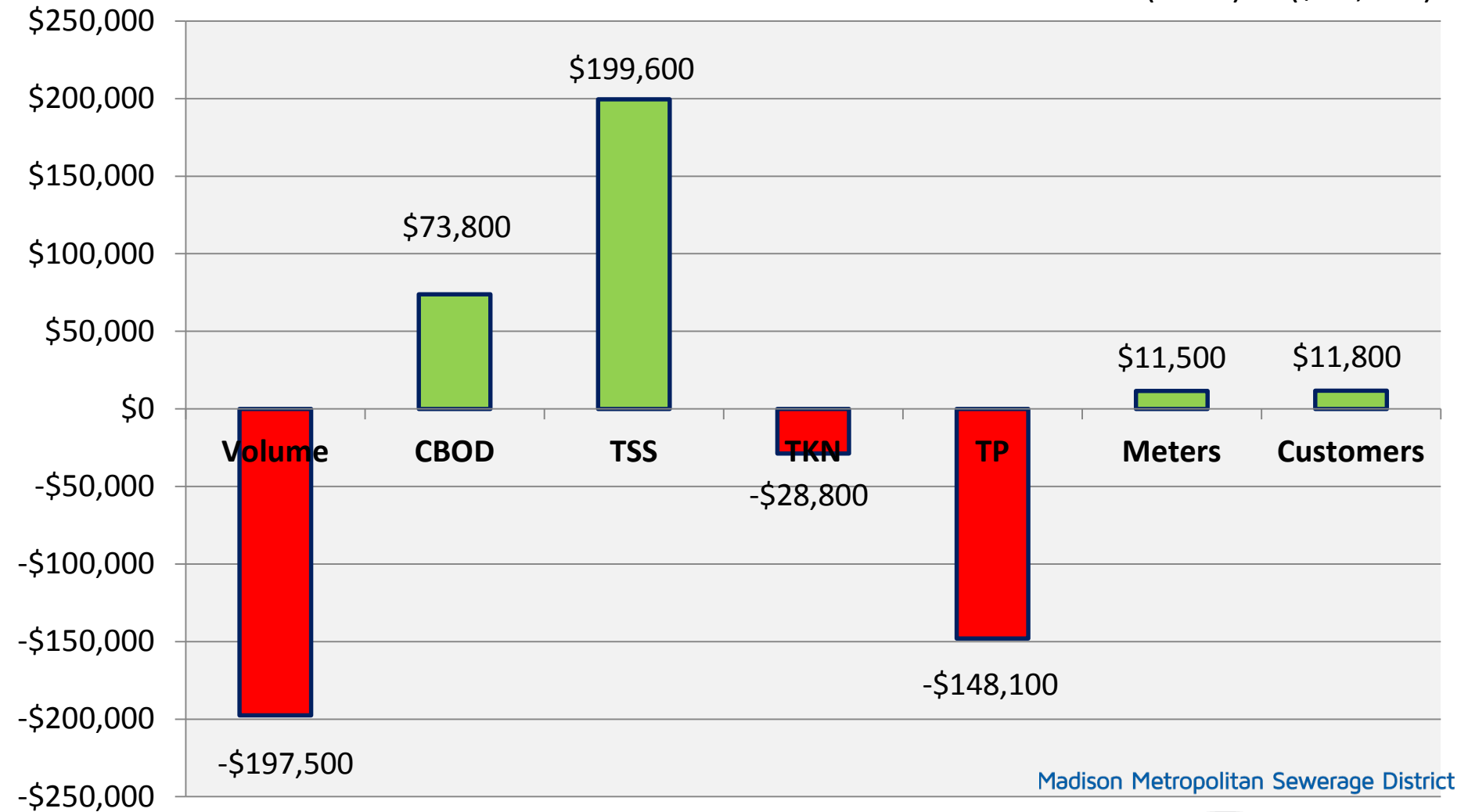
Equivalent meters

Actual customers

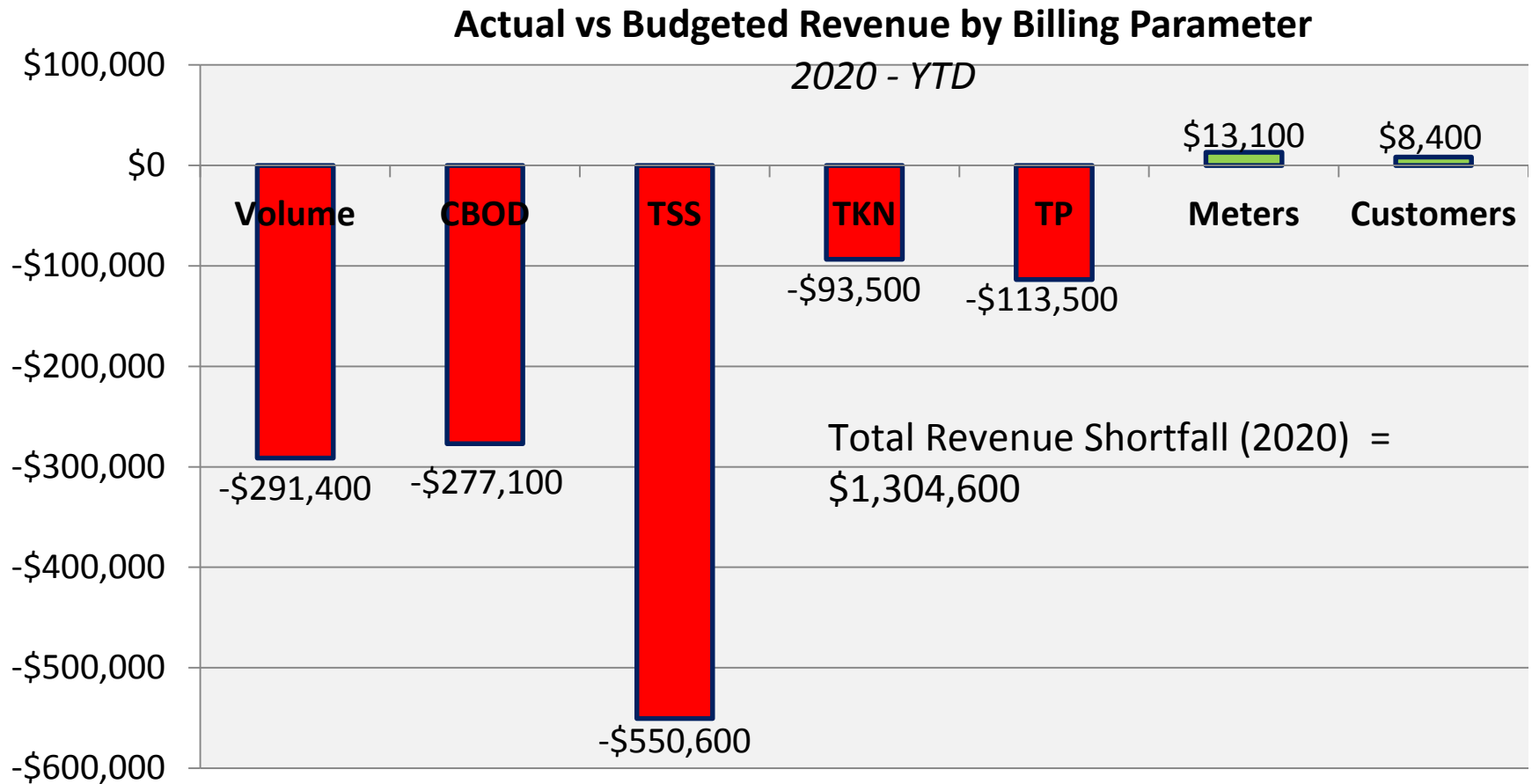


2019 Revenues thru Qtr 3 vs. Budget

Total Revenue Shortfall (2019) = (\$77,800)

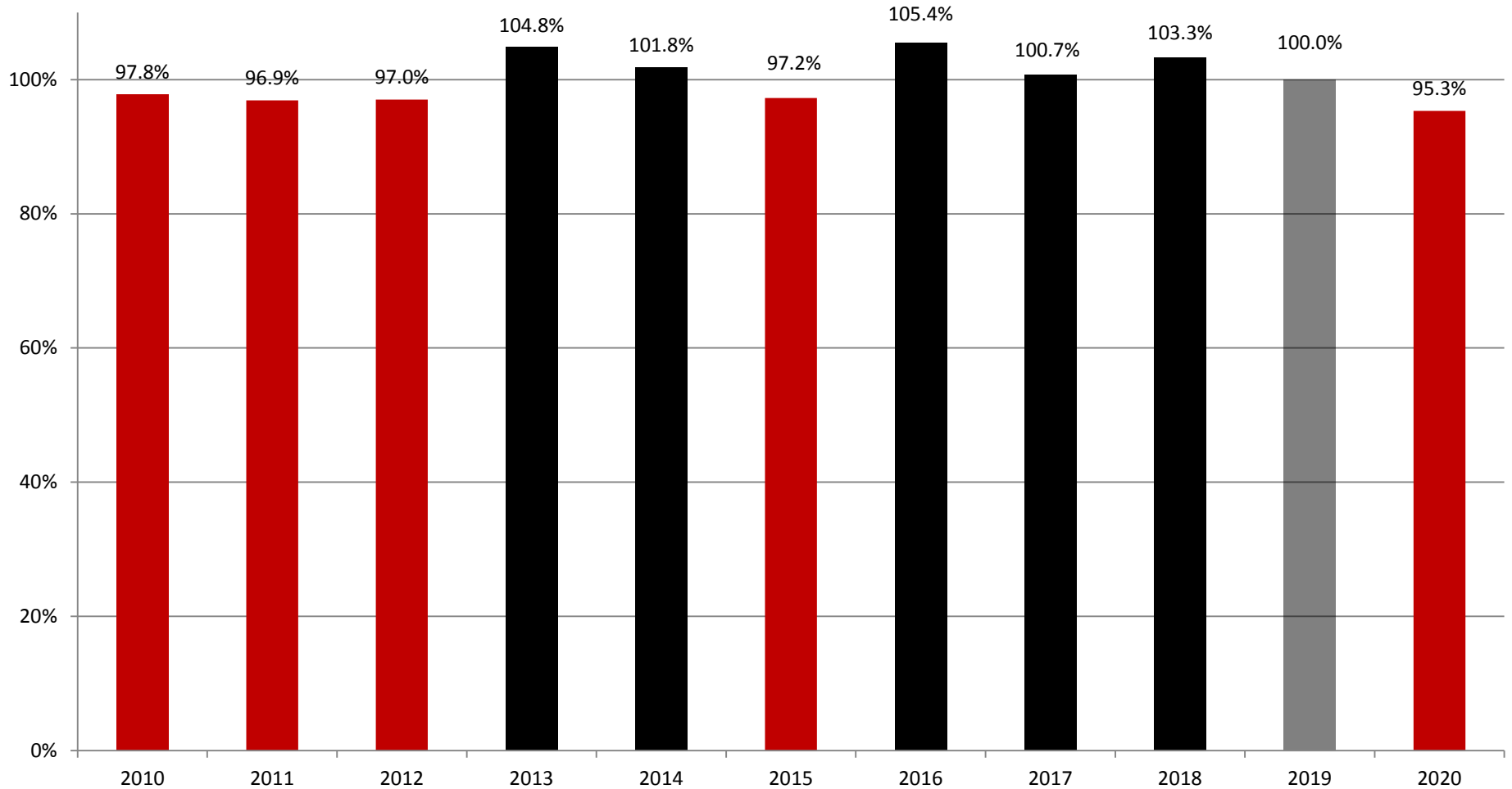


2020 Revenues thru Qtr 3 vs. Budget



Revenue History

Actual vs. Budgeted Service Charge Revenues

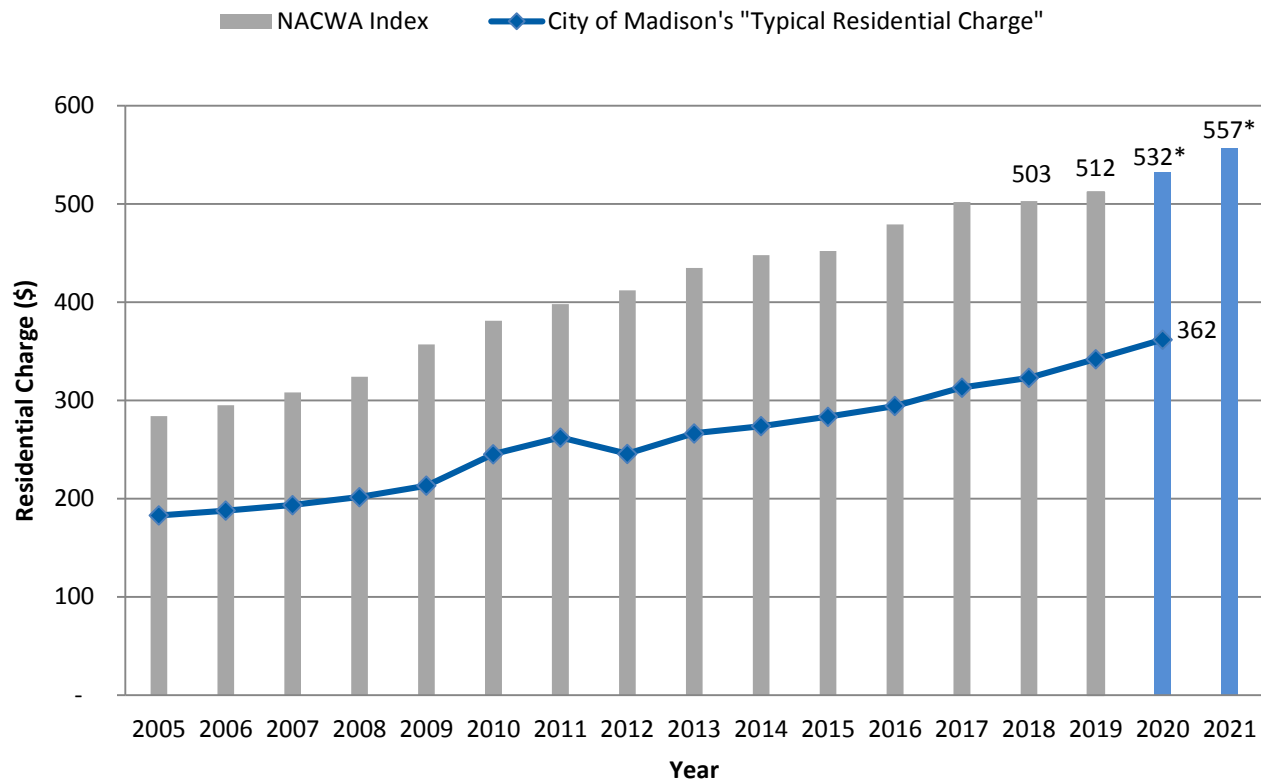


Madison Metropolitan Sewerage District



Rate Comparison

Rate Comparison between the District and the National Average



Budgeted Service Charges

**Operating Budget ➡ Required \$
(Service Charges)**

- **Operating Budget expenditure increase 2.8%**
- **\$775,000 budgeted use of reserves in 2020**
- **Required service charge revenues increase 5.2%
to \$43.5 million**



An Overview

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So that when billed: Actual Load x Rate = Required Revenue



Primary Drivers for 2021 Service Charge Rates

- **Required Service Charge increase of 5.2%**
- **Decreased flows and loadings**
- **CIP costs drive variations in parameter rate increases**



Total Cost Distribution

Parameter	2020 Amount	2021 Amount	Change, \$	% Change
Volume	\$12,167,616	\$13,028,518	\$860,902	7.1
CBOD	5,536,403	5,750,736	214,333	3.9
Suspended Solids	8,527,618	8,860,406	332,788	3.9
Nitrogen	2,637,150	2,768,925	131,774	5.0
Phosphorus	3,444,645	3,681,243	236,598	6.9
Equivalent Meters	5,736,909	6,058,723	321,814	5.6
Actual Customers	4,039,659	4,149,449	109,790	2.7
Total	\$42,090,000	\$44,298,000	\$2,208,000	5.2



Debt Service Cost Distribution

Parameter	2020 Amount	2021 Amount	Change, \$	Change, %
Volume	6,306,430	6,985,705	679,274	10.8
CBOD	1,487,483	1,579,159	91,676	6.2
Suspended Solids	2,875,449	3,023,610	148,161	5.2
Nitrogen	785,051	864,366	79,315	10.1
Phosphorus	1,085,424	1,189,727	104,303	9.6
Equivalent Meters	203,559	275,684	72,125	35.4
Actual Customers	\$4,011,604	\$4,119,750	\$108,146	2.7
Total	\$16,755,000	\$18,038,000	\$1,283,000	7.66



Debt Service Allocation

BEFORE THE
PUBLIC SERVICE COMMISSION OF WISCONSIN

Oscar Mayer & Co., Inc.

vs.

The City of Madison and the Madison
Metropolitan Sewerage District

City of Madison, Dane County

vs.

Madison Metropolitan Sewerage
District

MADISON METROPOLITAN
SEWERAGE DISTRICT
RECEIVED

FEB 22 1977

FEB 17 1977

Lewis T. Mittness

Executive Secretary
Public Service Commission of Wisconsin

2-U-7988

OO-SR-2

FINDINGS OF FACT AND CONCLUSION

On March 27, 1974, Oscar Mayer & Co., Inc., filed a complaint with the Commission pursuant to section 66.076(9), Wis. Stats., alleging that the sewer charges imposed upon the company by the City of Madison and the Madison Metropolitan Sewerage District are unreasonable and unjustly discriminatory.

Debt Service Allocation

2. That the District allocate debt-service costs arising from the construction of facilities to either present capacity or excess capacity.

3. That the District use the following definitions and procedure in determining costs related to excess capacity.

The excess capacity of an item shall be defined as the difference between the maximum design capacity of that item and its peak usage during the previous year. The excess capacity for each pumping station shall be determined separately. The excess capacity for each section of interceptor and/or force main between each pump station shall be determined separately. The ratio of the excess capacity to the design capacity shall be used to determine the amount of debt service for that item which is to be allocated to excess capacity, with the remaining being allocated to present capacity.

4. That the cost of excess capacity be collected on a customer basis.

Debt Service

Allocation to Volume - Example

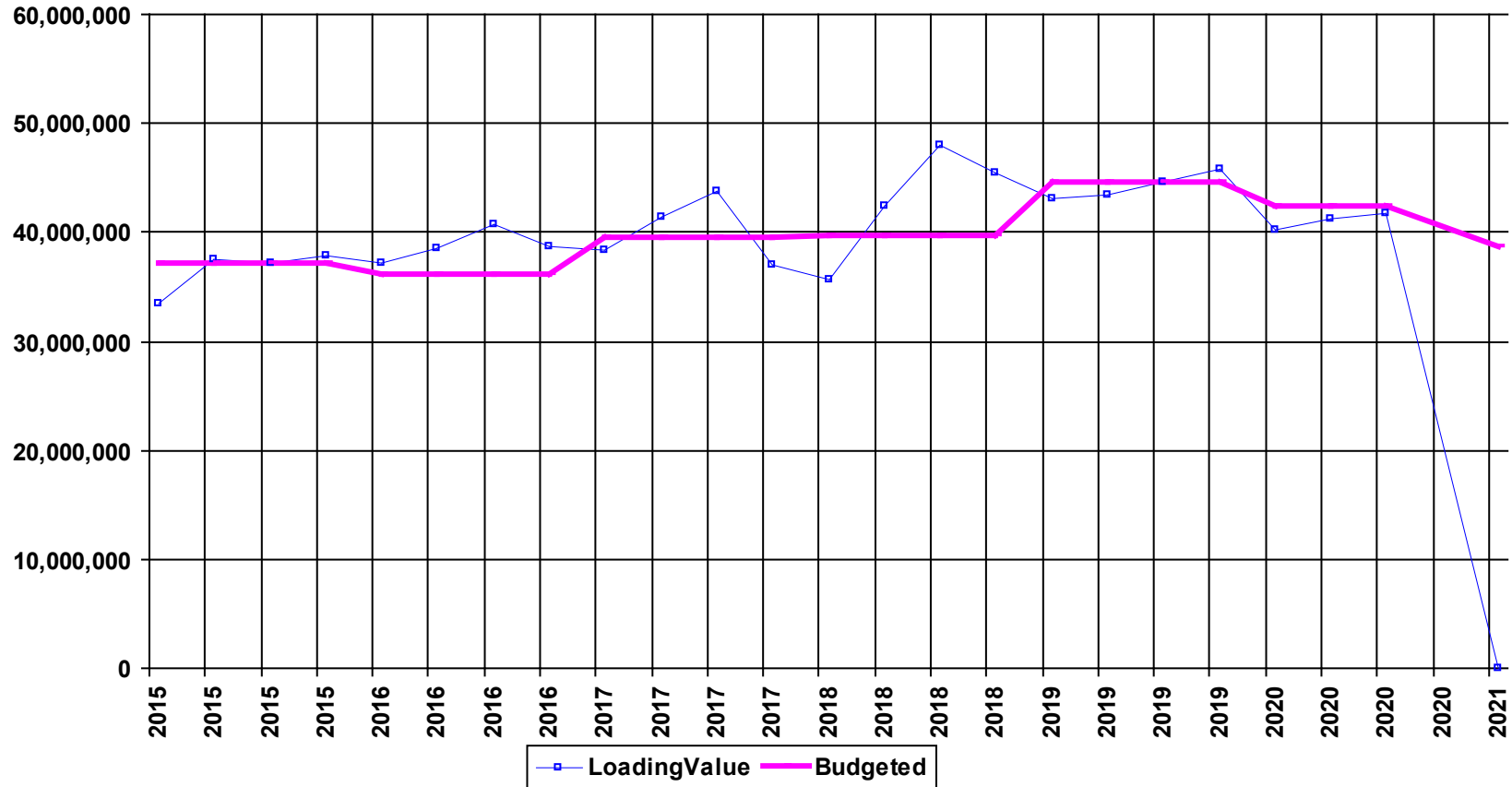
Project	Debt Service Costs	Percent Excess Capacity	Actual Customer Costs	Volume Costs
2019				
NEI Truax Ext. Relief	291,000	100	291,000	0
LPI - Phase 1	363,000	25	91,000	135,000
	654,000	2	382,000	135,000
2020				
NEI Truax Ext. Relief	673,000	66.3	446,000	204,000
LPI - Phase 1	1,044,000	16.5	172,000	564,000
	1,717,000		618,000	768,000
Change	1,063,000		236,000	633,000



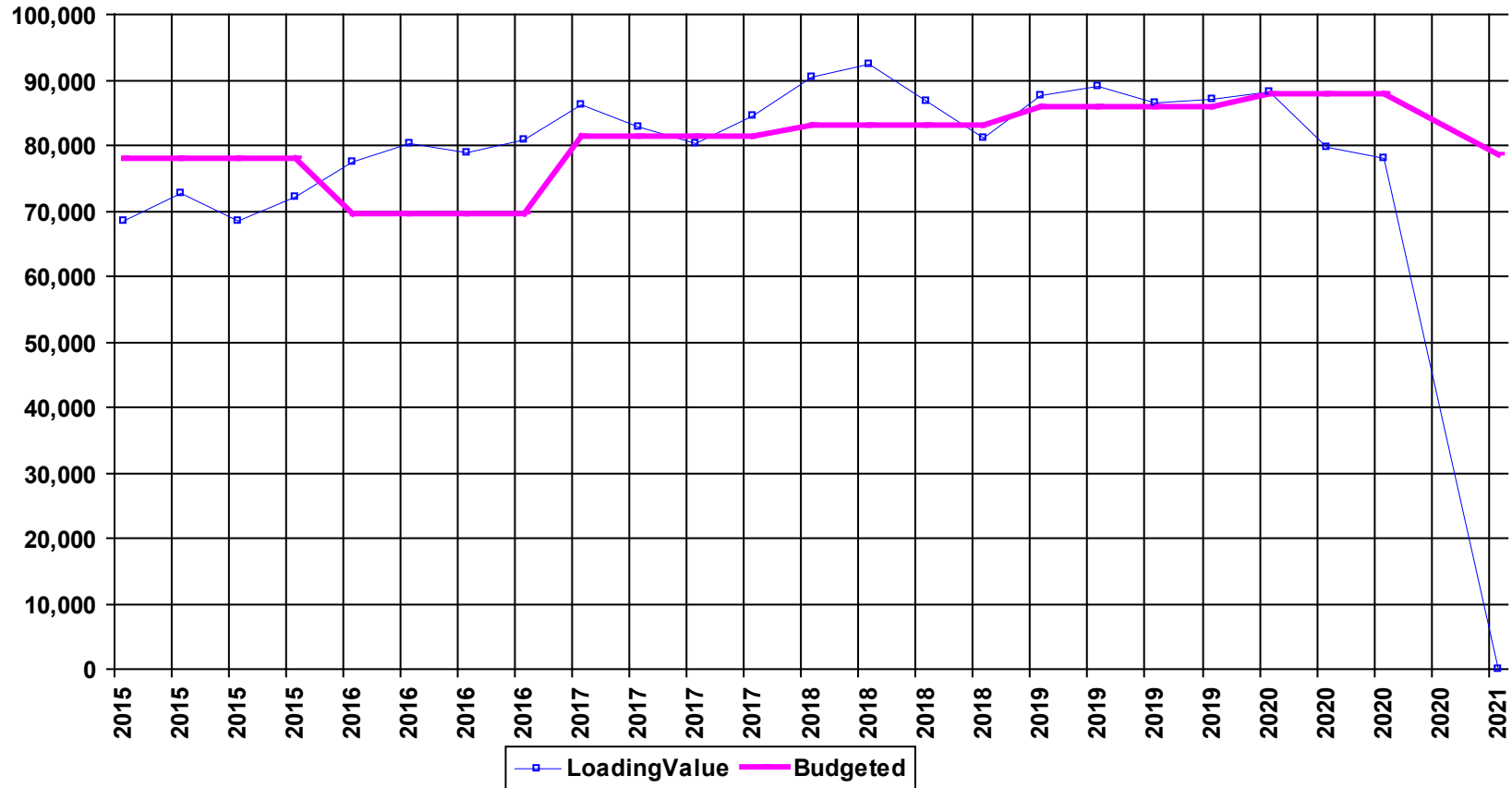
Review of Nine Springs Loads



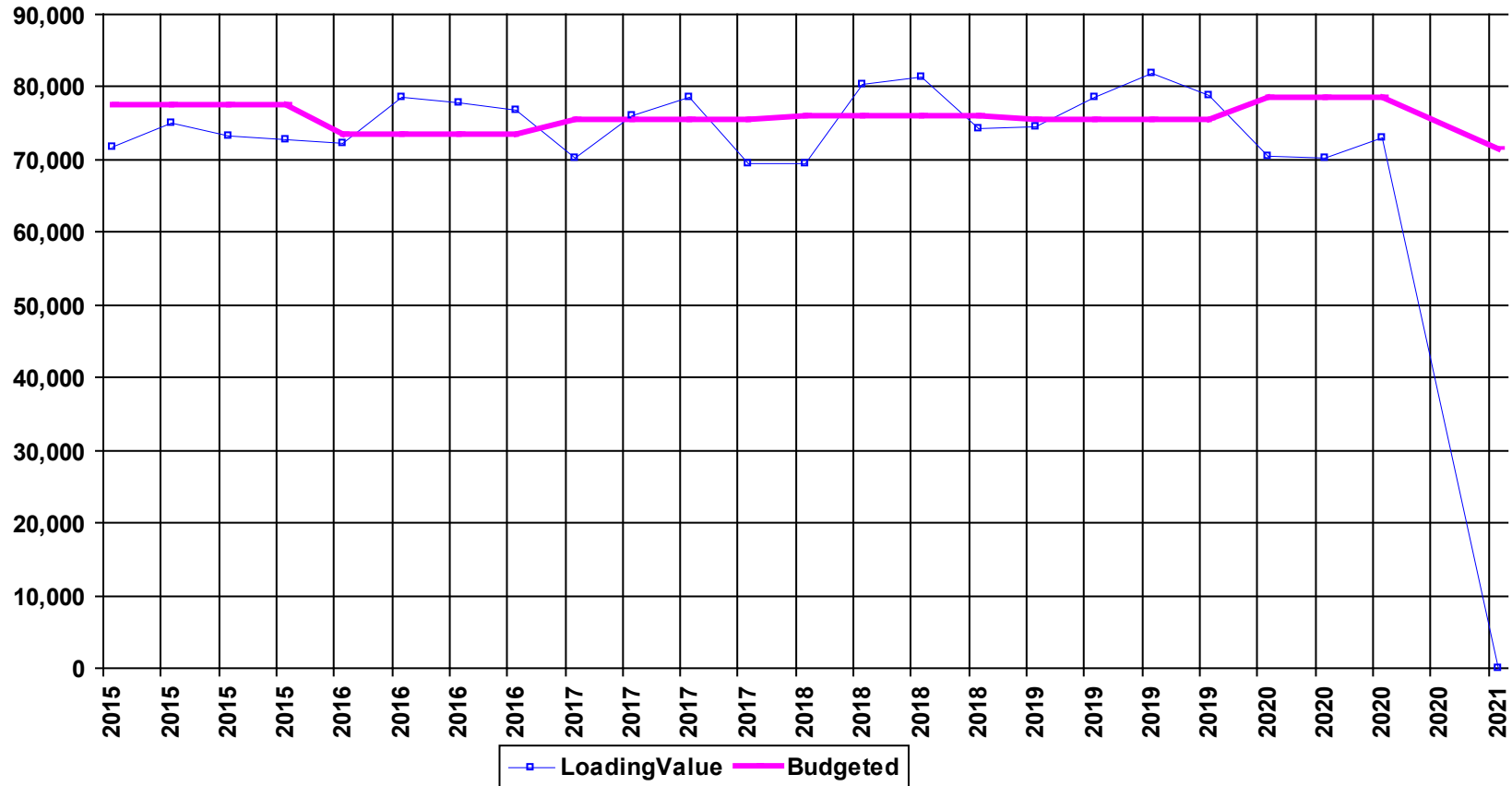
Nine Springs – Volume



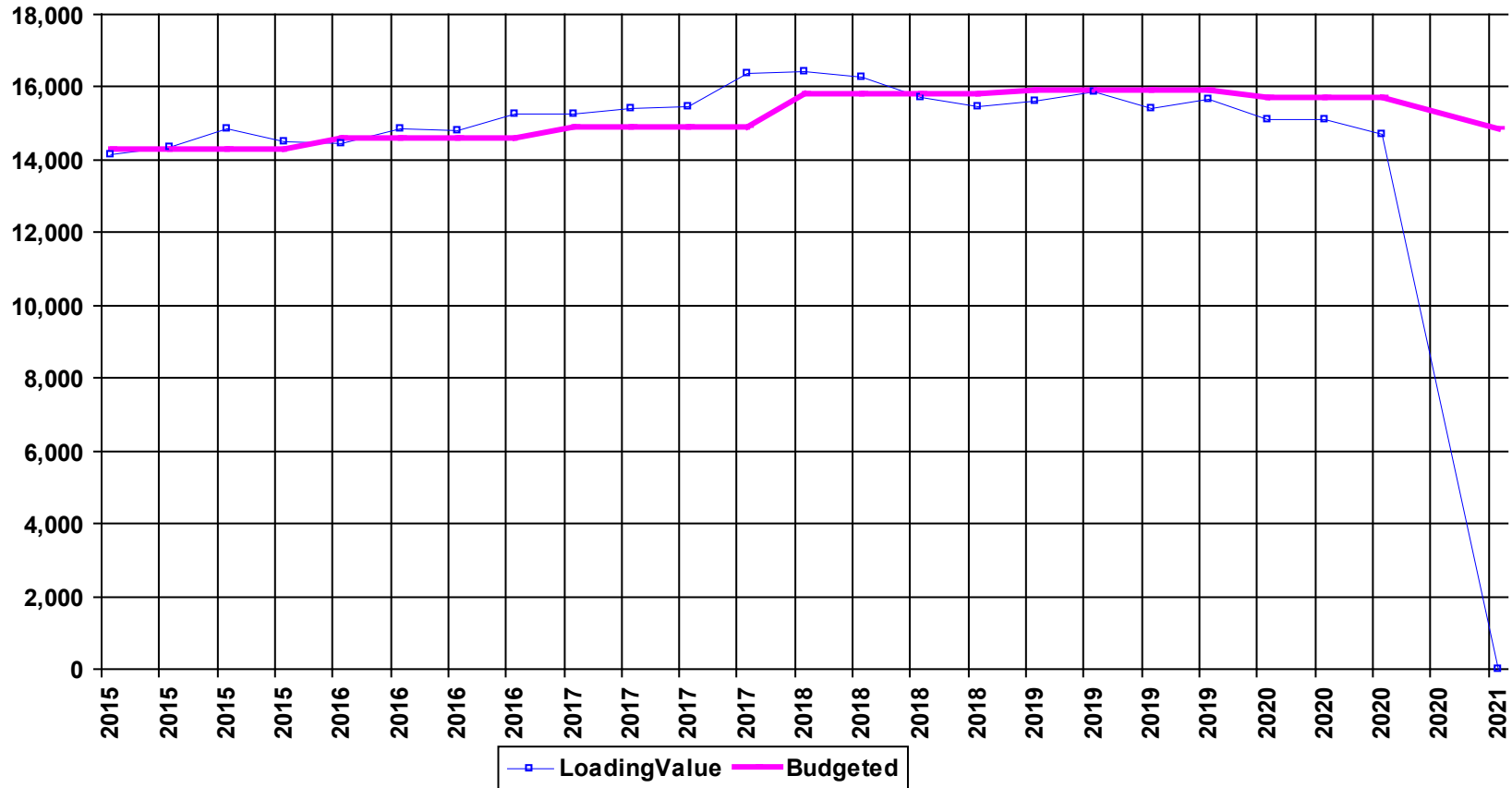
Nine Springs - CBOD



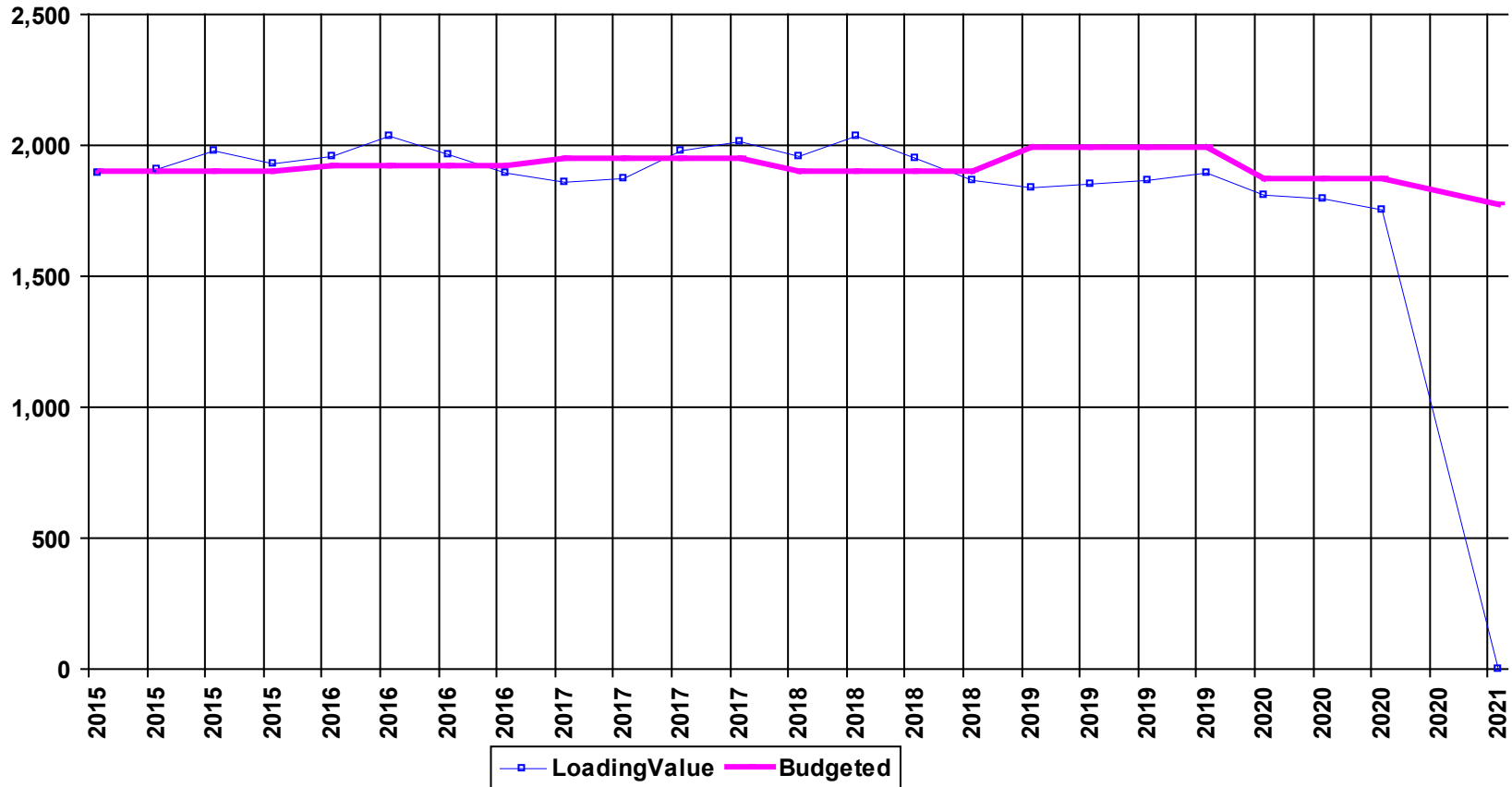
Nine Springs – Suspended Solids



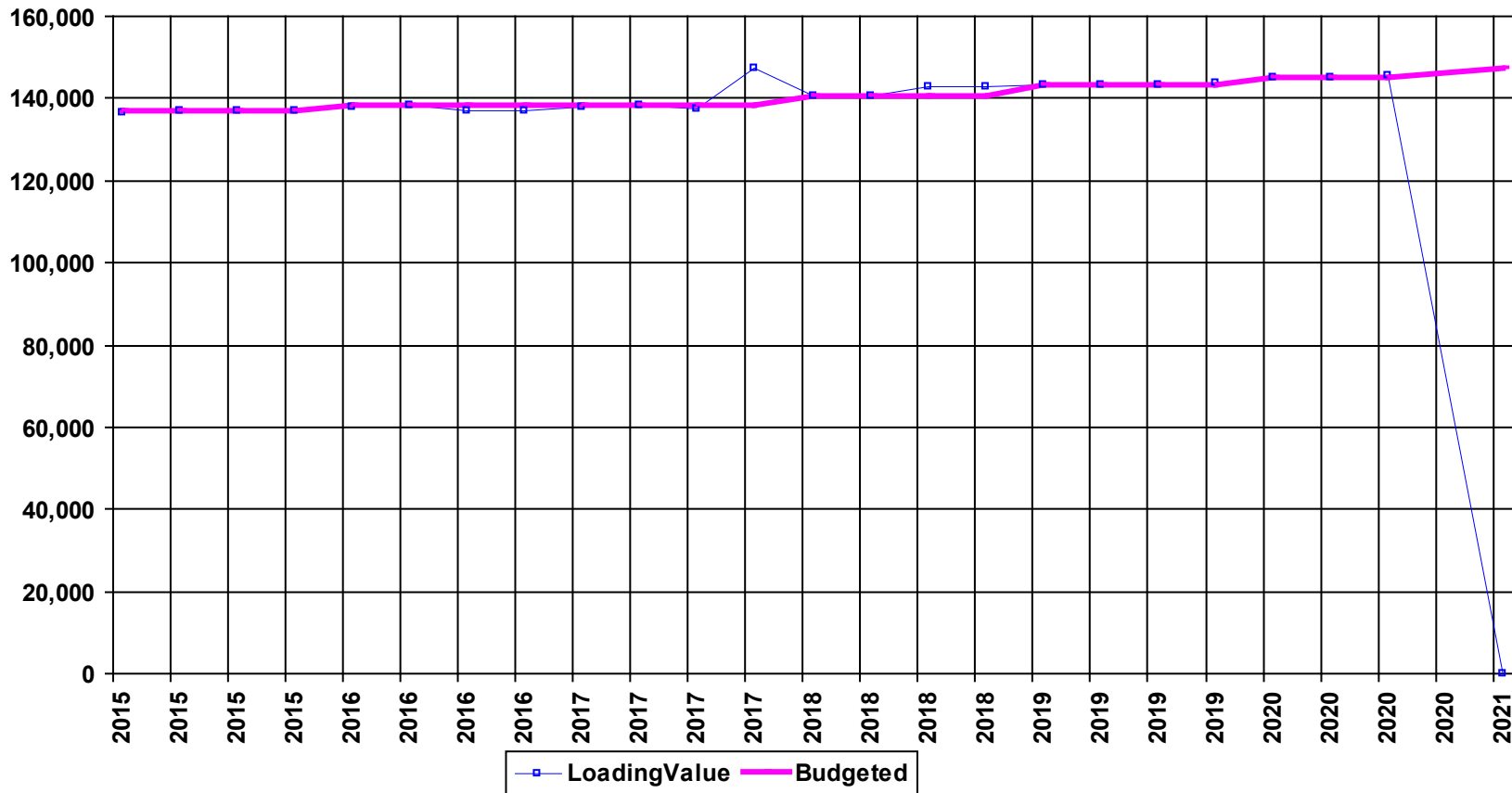
Nine Springs – Nitrogen



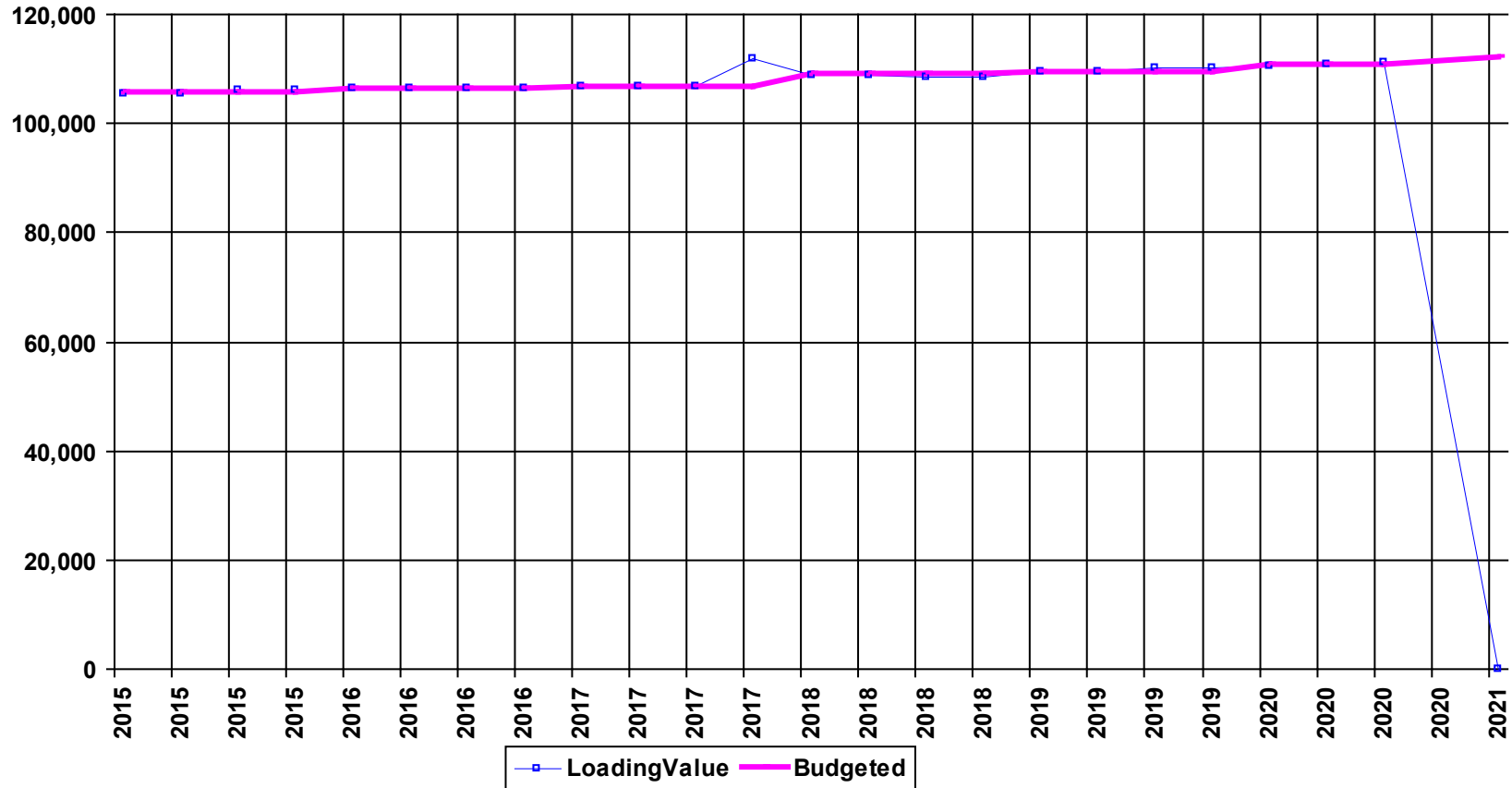
Nine Springs - Phosphorus



Nine Springs – Equivalent Meters



Nine Springs – Actual Customers



Nine Springs Loadings

Parameter	Units	2020	2021	% Change
Volume	MGD	44.56	40.82	-8.4
CBOD	lbs/day	90,253	80,472	-10.8
Suspended Solids	lbs/day	83,061	75,978	-8.5
Nitrogen	lbs/day	16,019	15,144	-5.5
Phosphorus	lbs/day	1,922	1,816	-5.5
Equivalent Meters		145,438	147,679	1.5
Actual Customers		110,796	112,152	1.2



Proposed 2019 Service Charge Rates

Parameter	Units	2020	2021	% Change
Volume	MG	\$781.45	\$919.30	17.6
CBOD	lb	\$0.16760	\$0.19579	16.8
Suspended Solids	lb	\$0.28051	\$0.31950	13.9
Nitrogen	lb	\$0.44981	\$0.50093	11.4
Phosphorus	lb	\$4.89623	\$5.55236	13.4
Equivalent Meters	per year	\$39.45	\$41.03	4.0
Actual Customers	per year	\$36.46	\$37.00	1.5



“Average Residential” Customer Charge

		2020	2021	% Change
Average Residential Charge (current loadings)	per year	\$213.12	\$234.33	10.0%
	per month	\$17.76	\$19.53	



Septage Rates

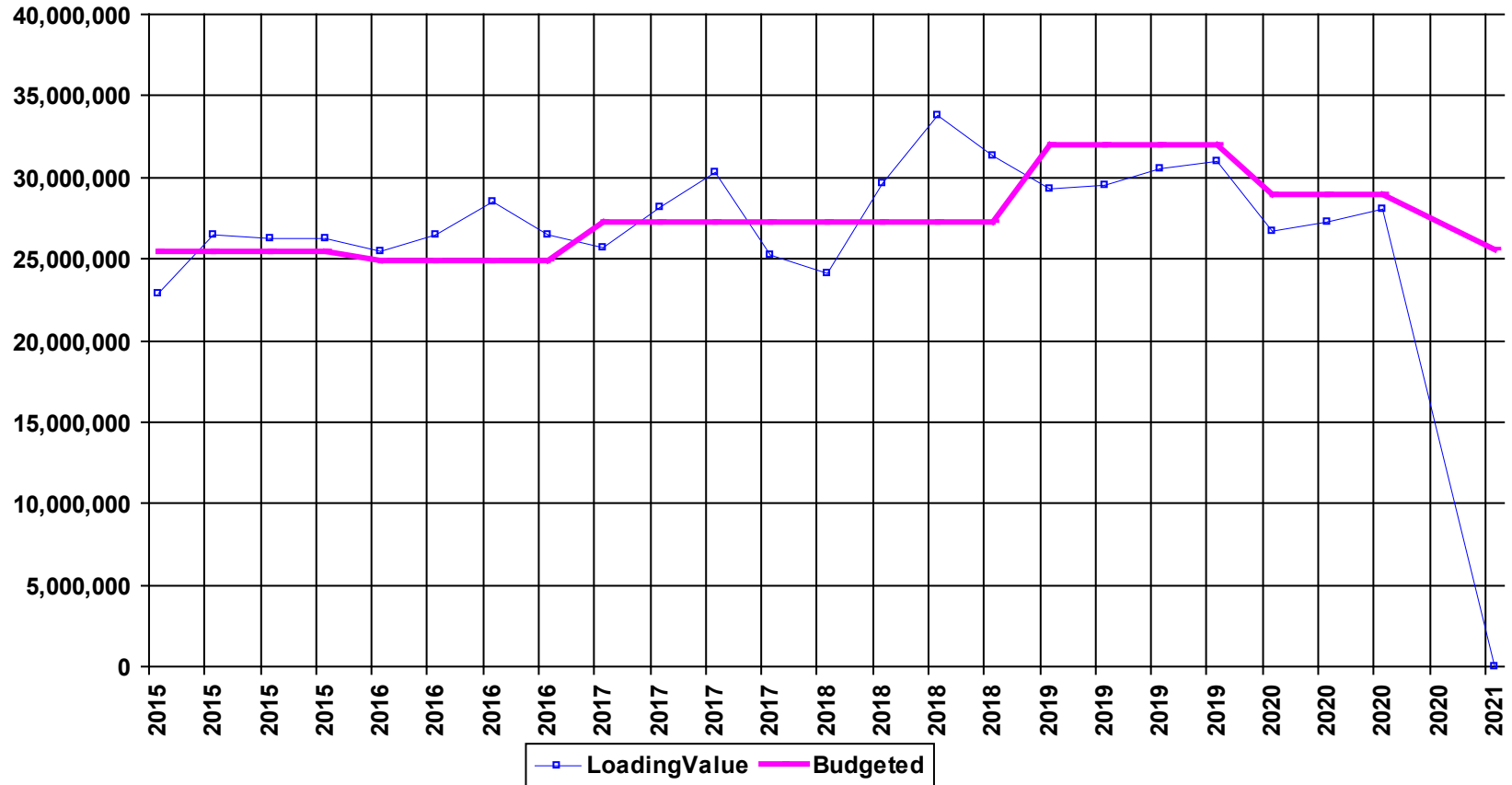
Parameter	Units	2020	2021	% Change
Septic Tank Wastes	per 1,000 gallons	\$26.90	\$30.60	13.8
Holding Tank Wastes	per 1,000 gallons	\$4.22	\$4.84	14.7
Grease Trap Wastes	per 1,000 gallons	\$108.70	\$125.00	15.0
Settling Basin Wastes	per 1,000 gallons	\$244.00	\$278.00	13.9
Portable Toilet Wastes	per 1,000 gallons	\$97.60	\$111.20	13.9
Administrative Fee	per month	\$35.91	\$37.27	3.8



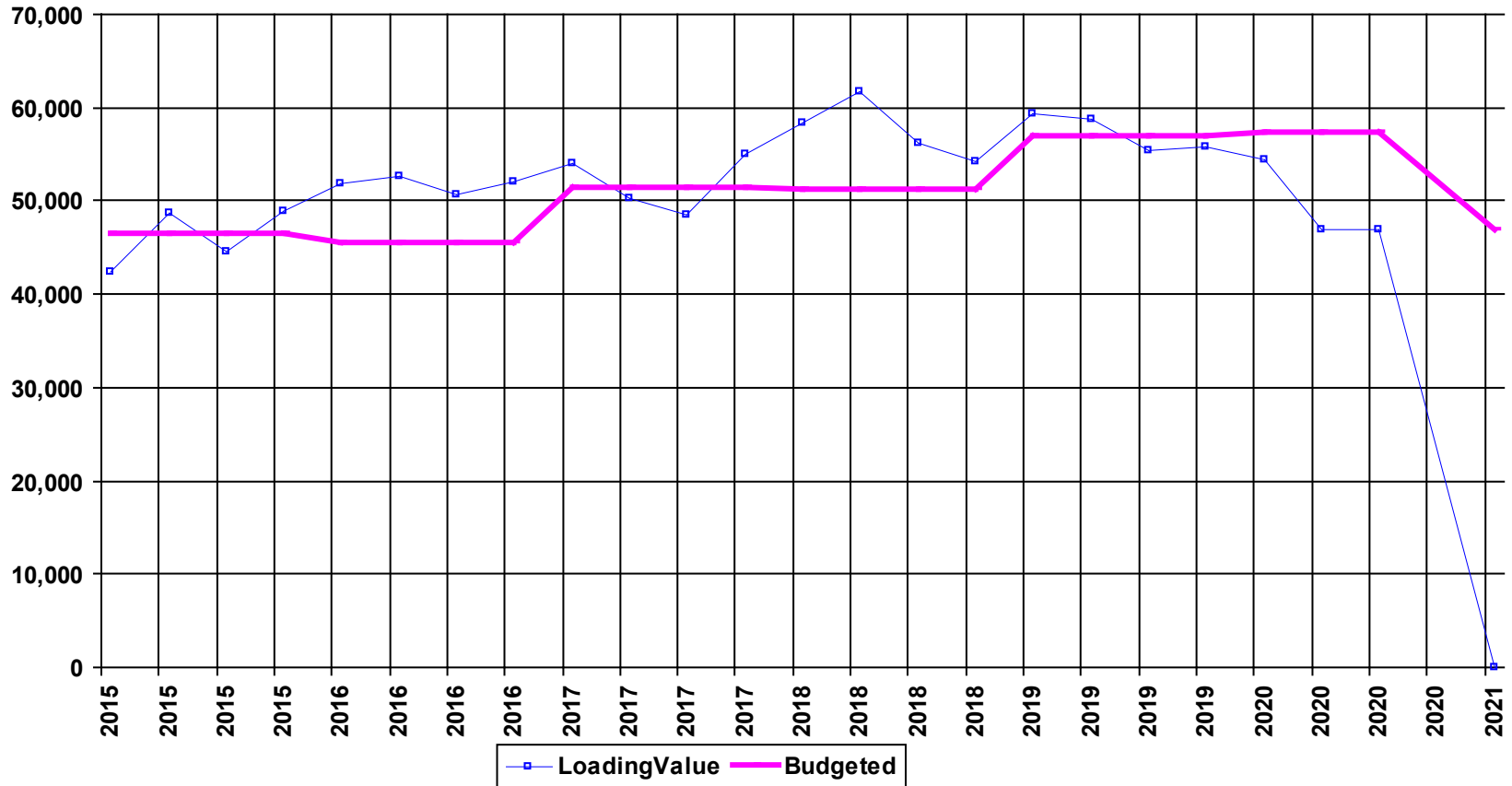
Review of Customer Loadings and Charges



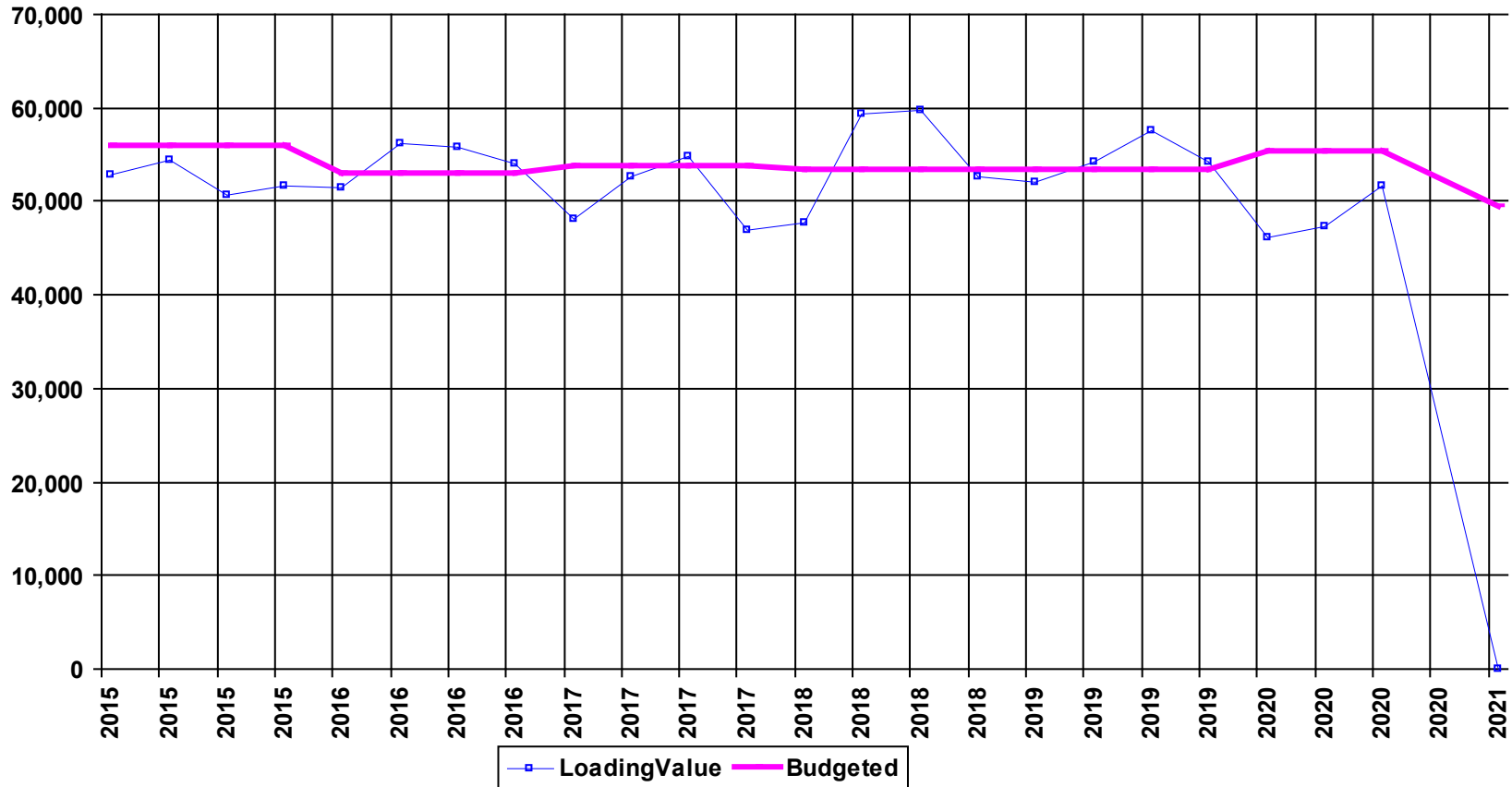
City of Madison - Volume



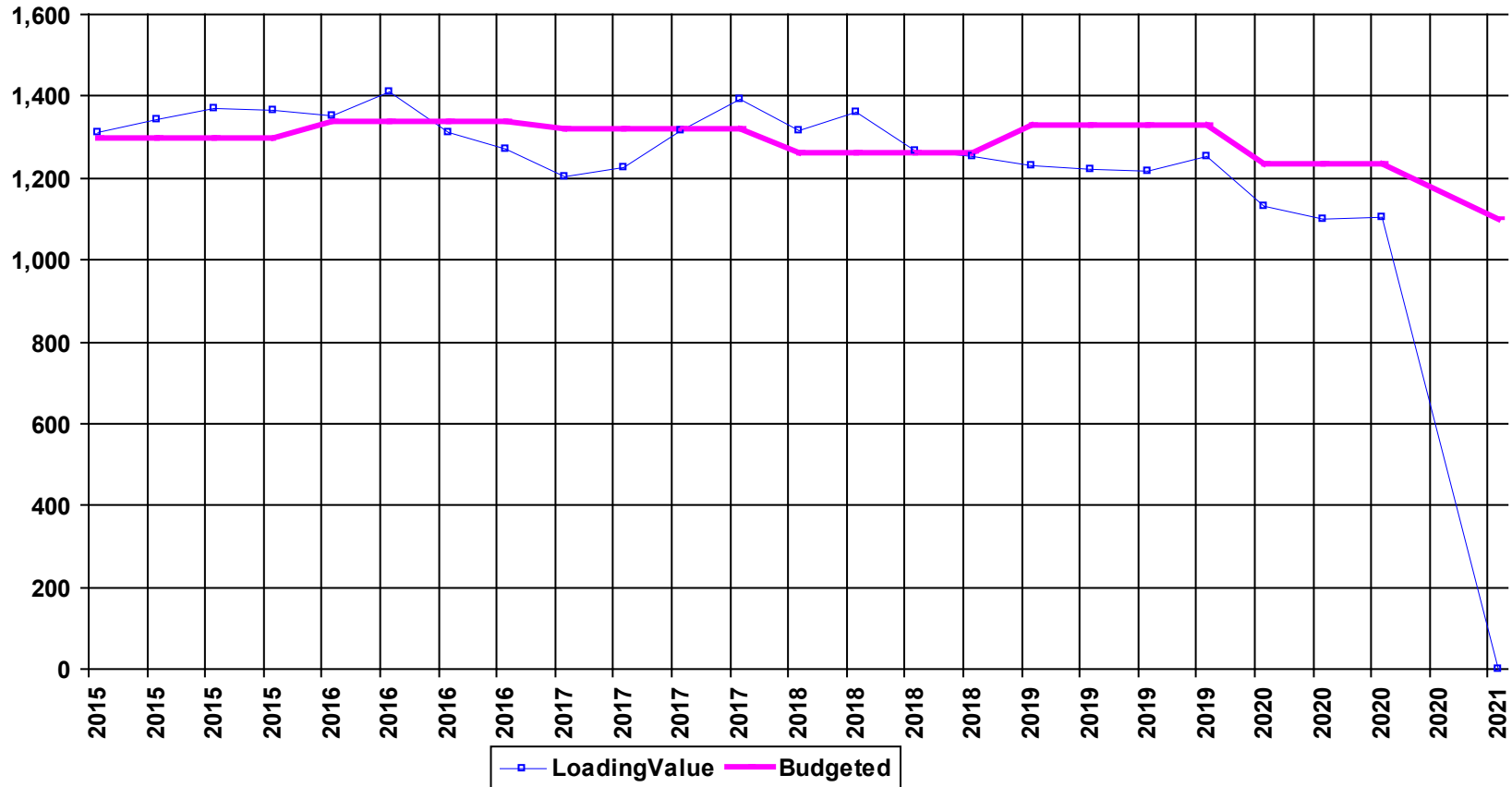
City of Madison - CBOD



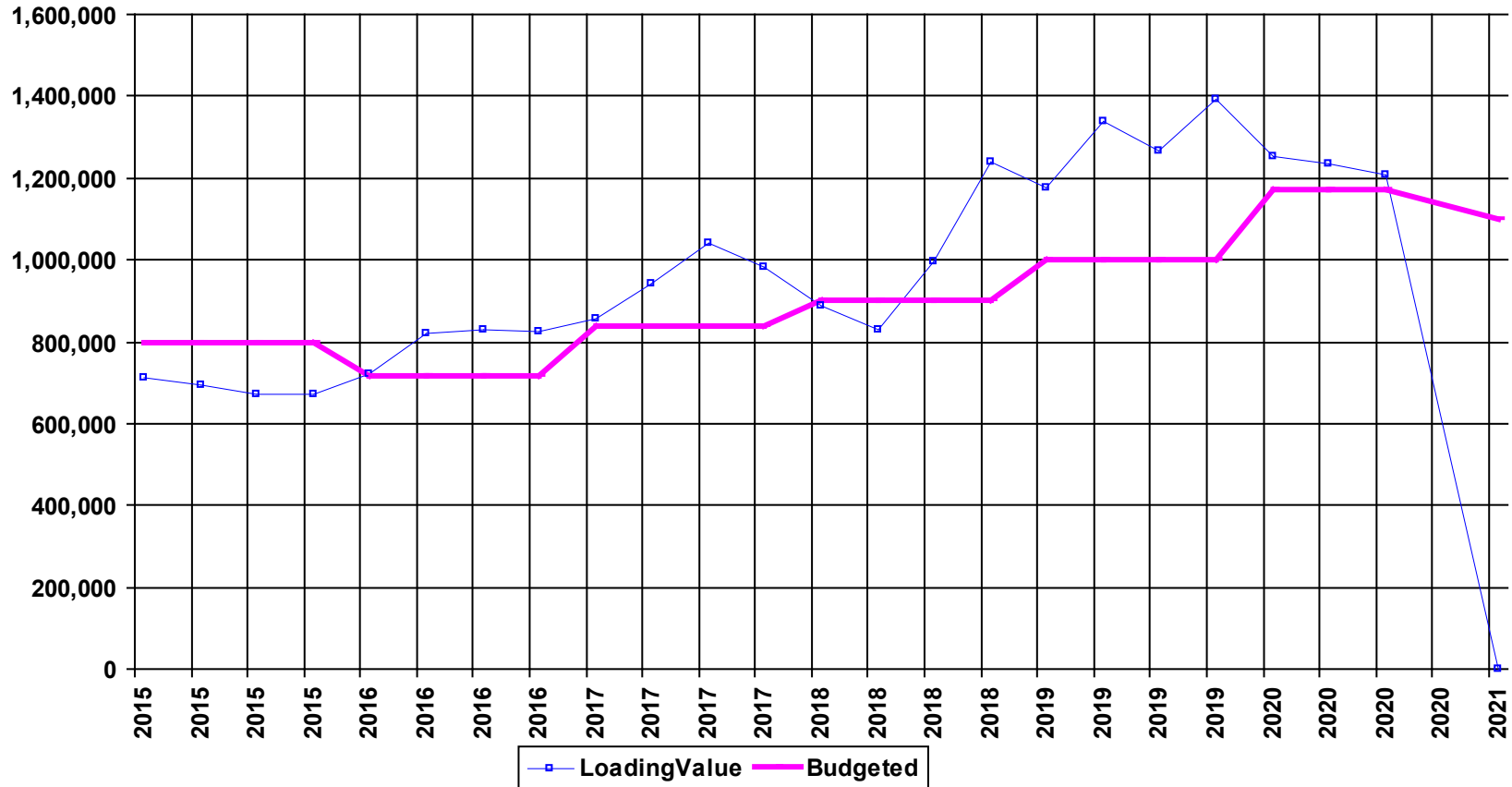
City of Madison – Suspended Solids



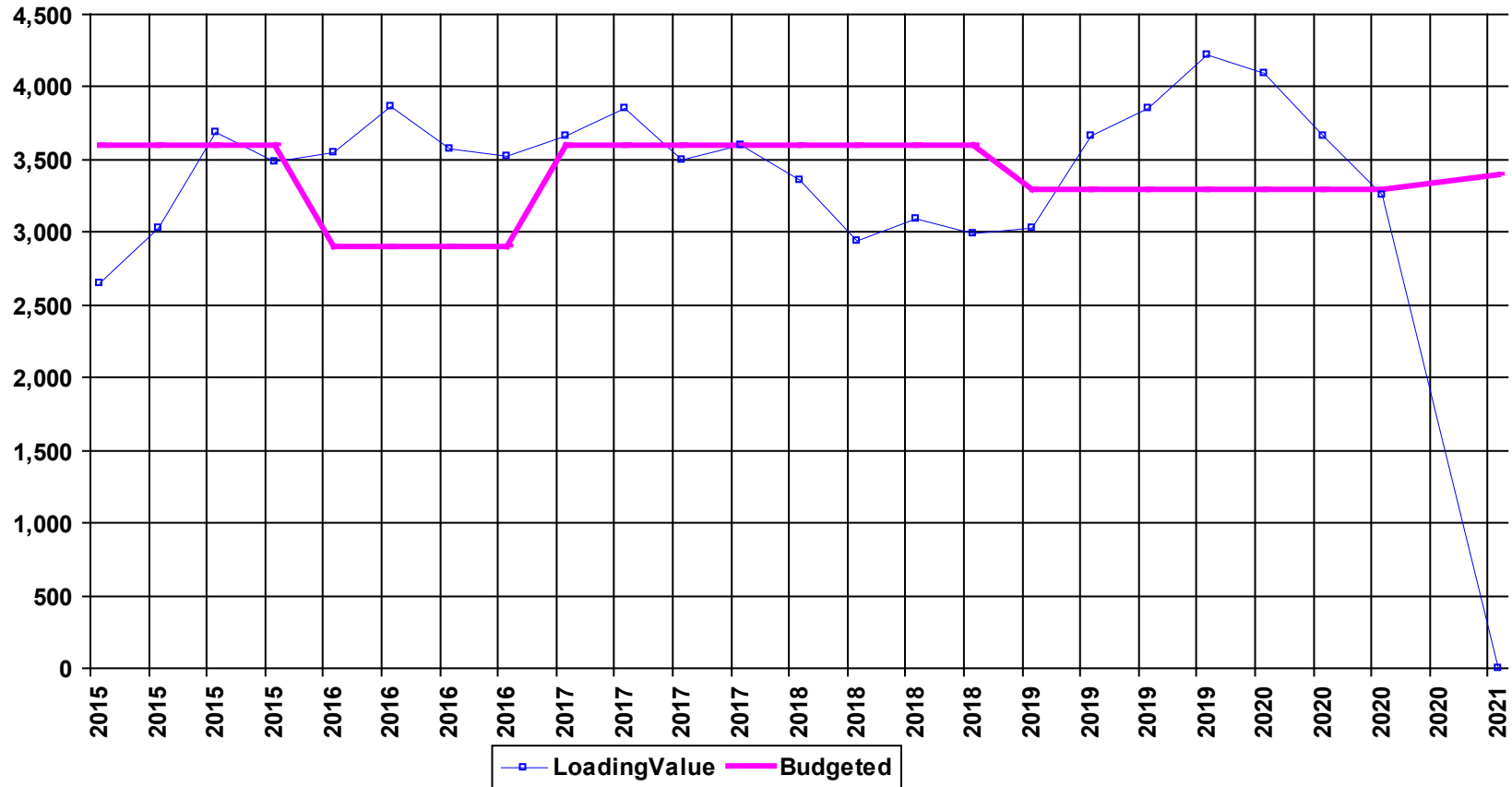
City of Madison - Phosphorus



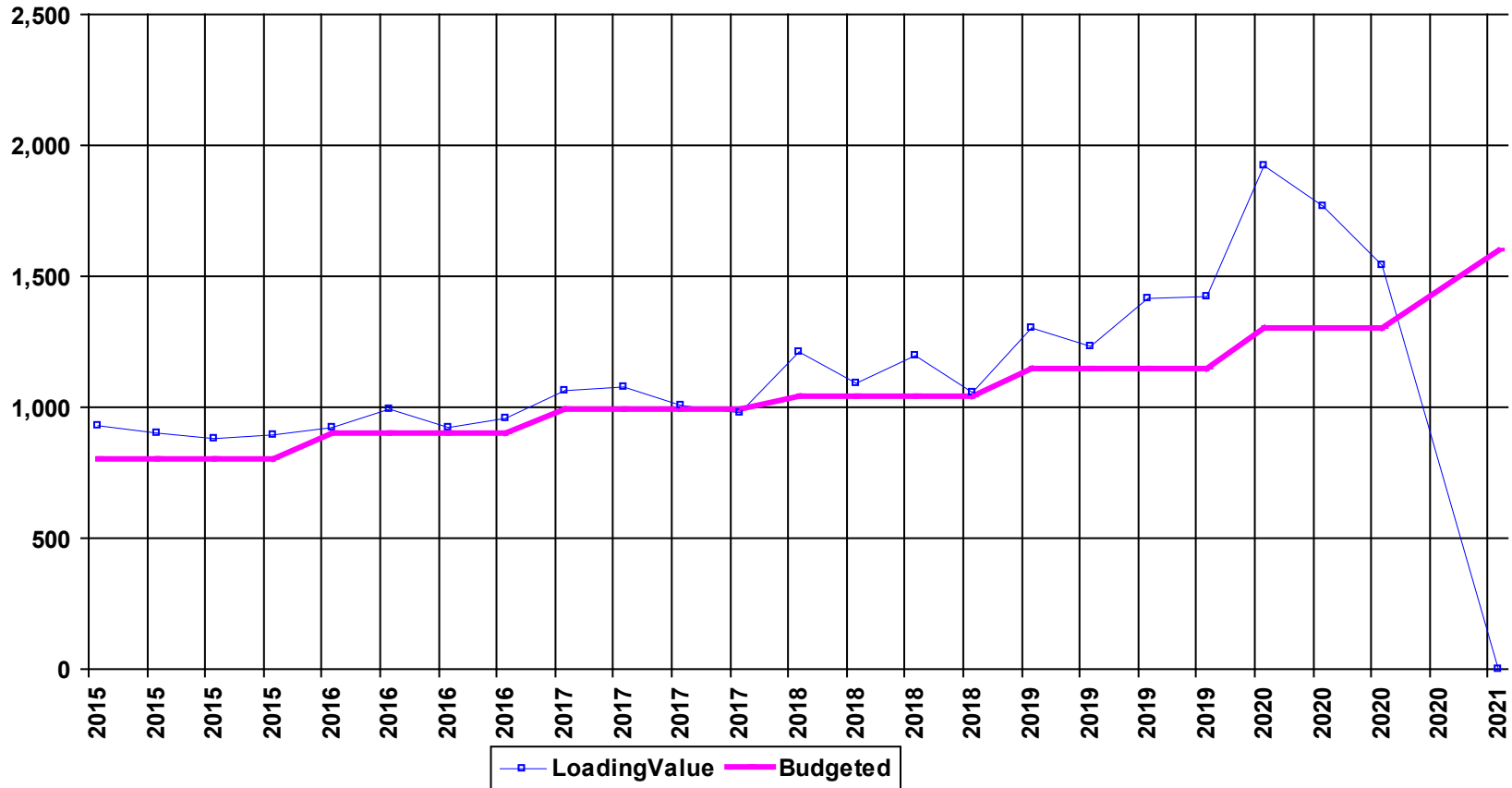
City of Monona- Volume



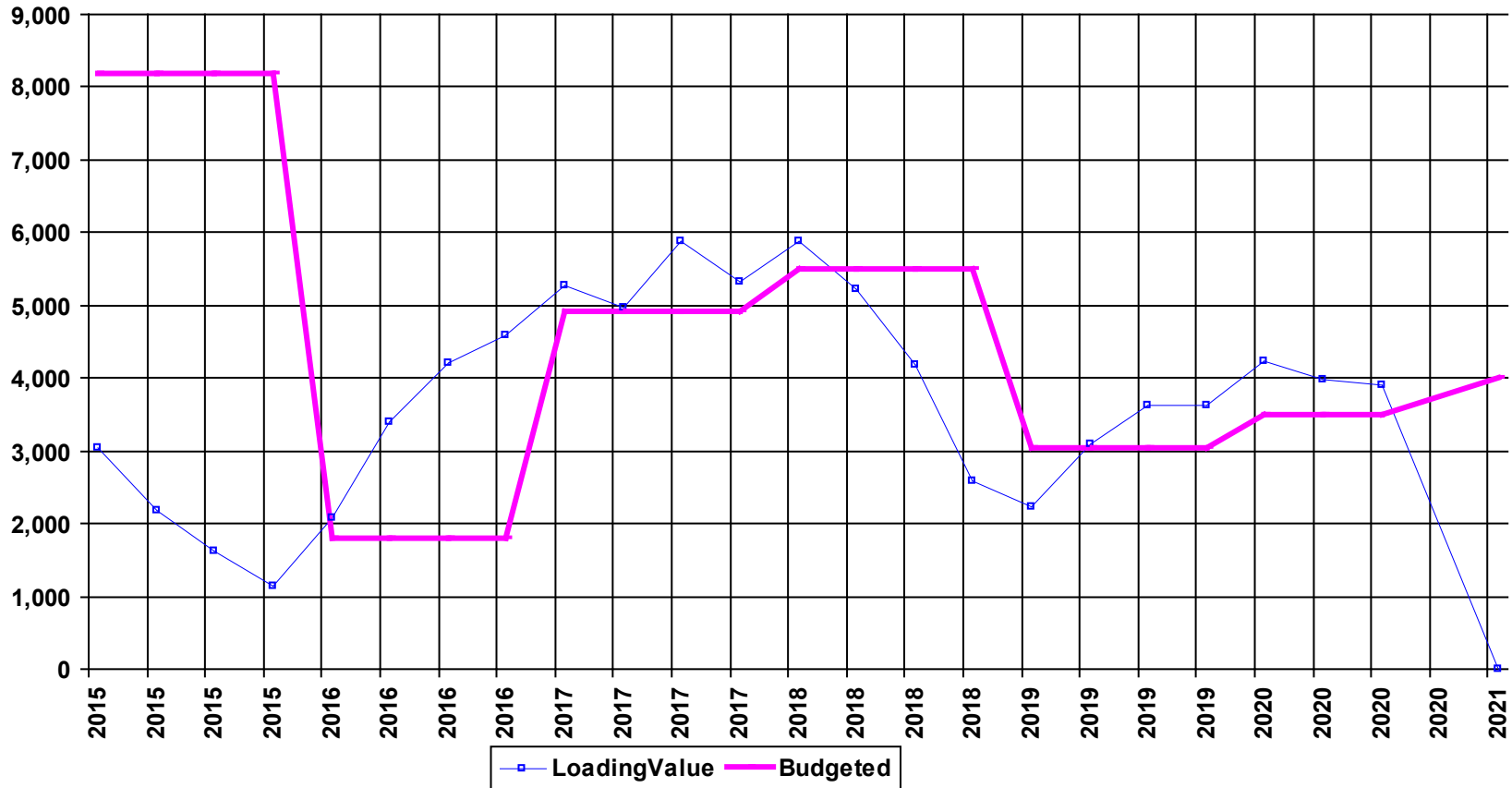
City of Middleton – Suspended Solids



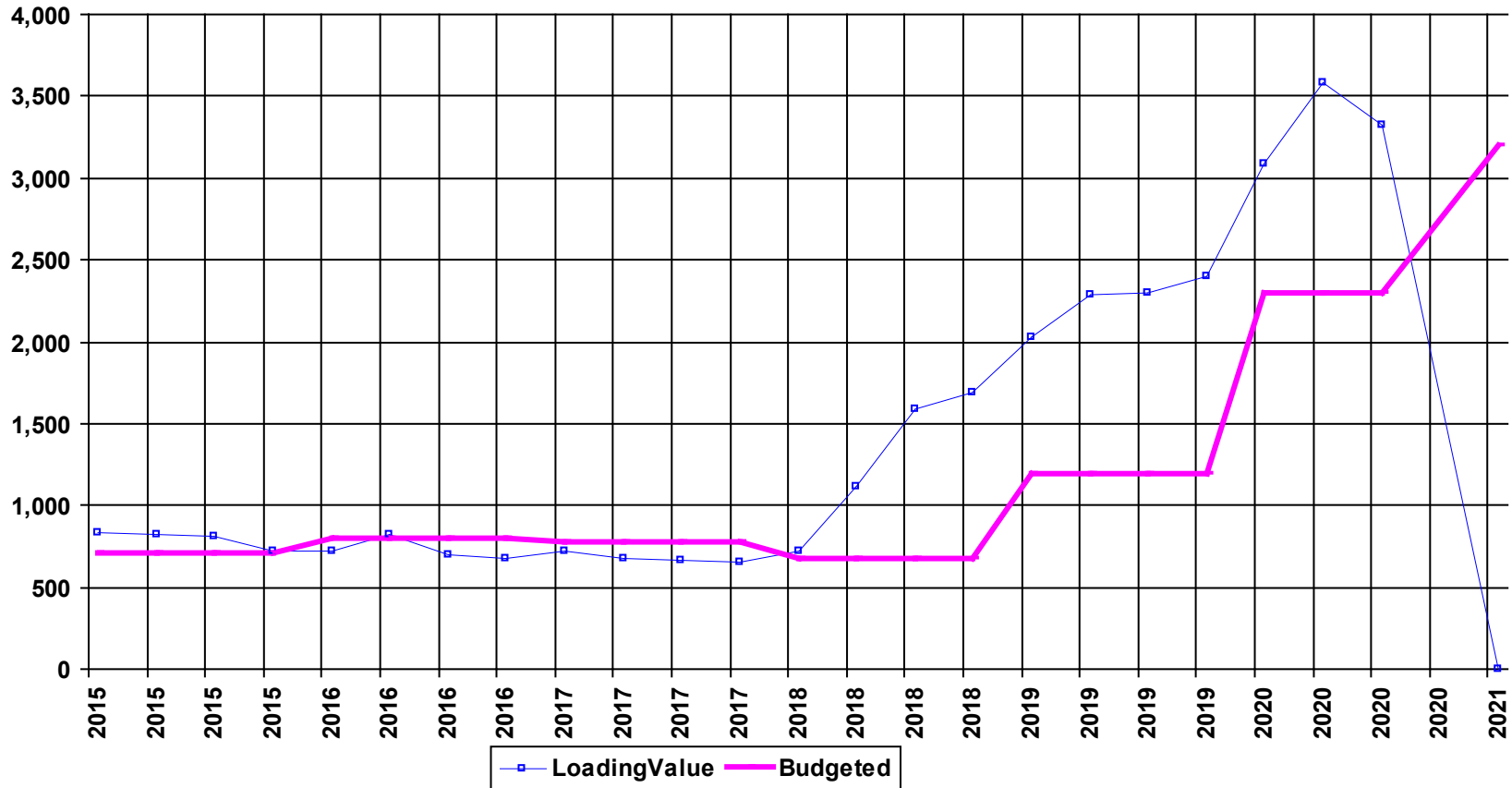
Village of Cottage Grove - CBOD



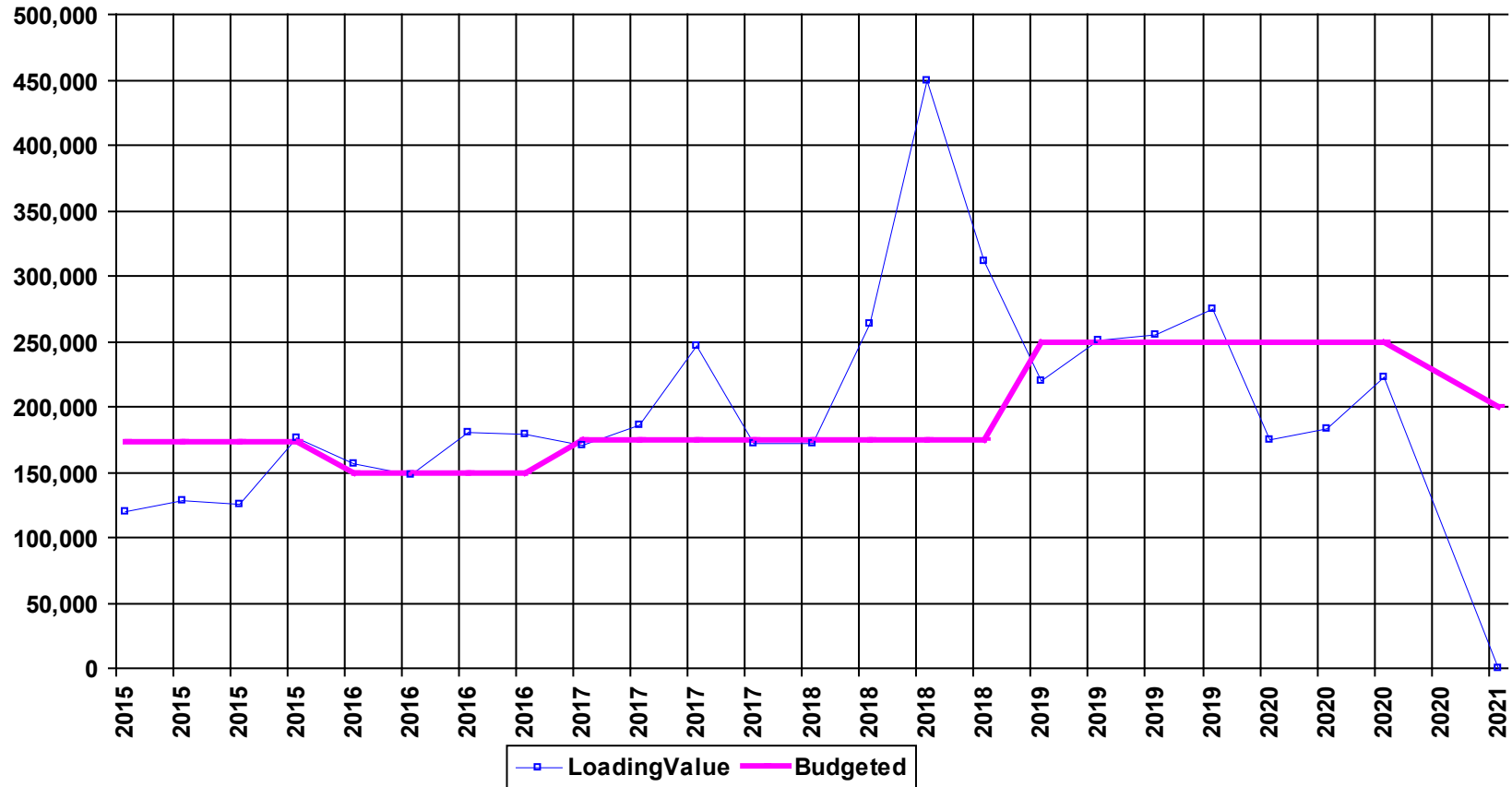
Village of DeForest - CBOD



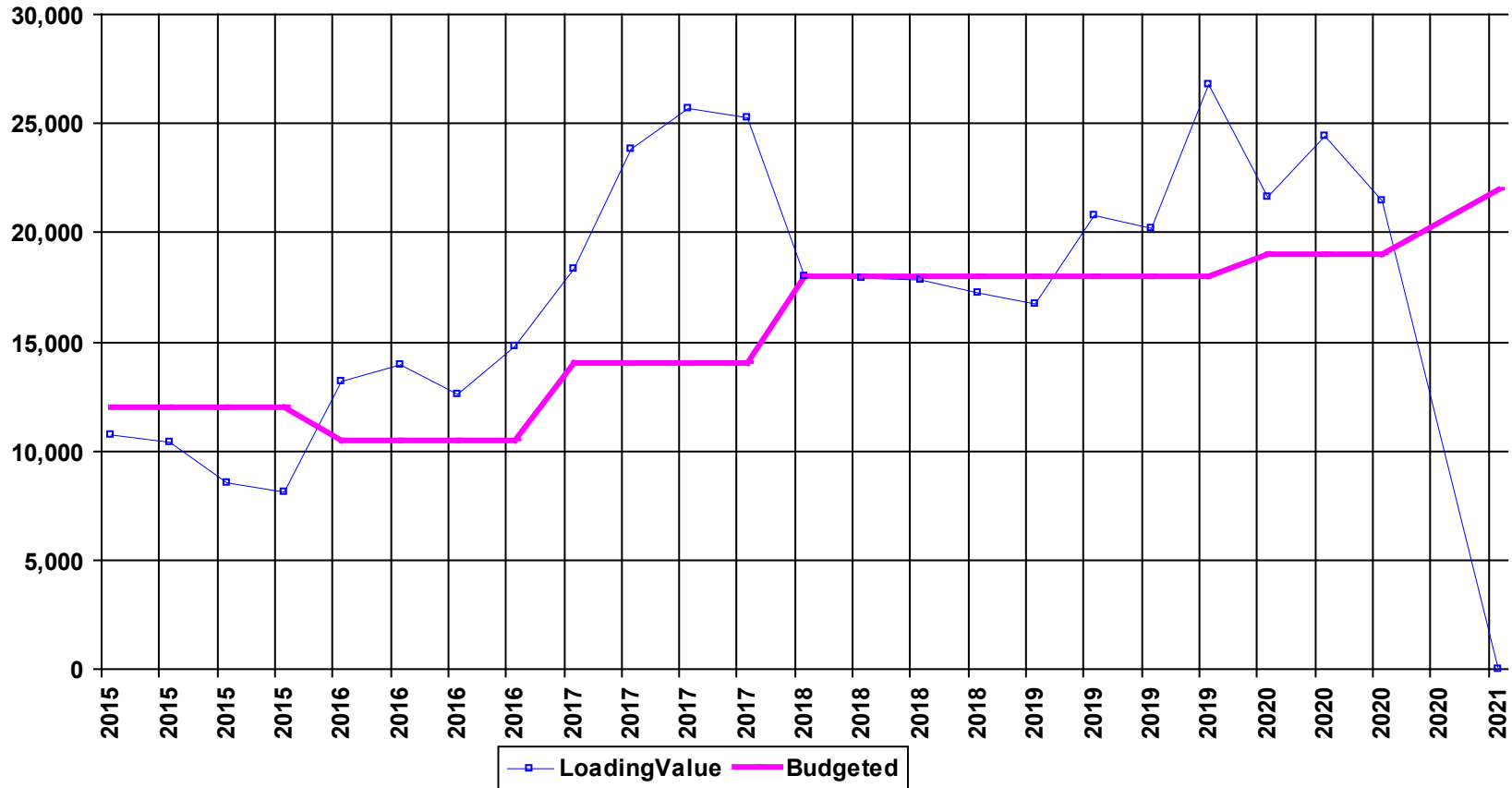
Village of Windsor - CBOD



Town of Dunn #1 - Volume



Town of Dunn #4 - Volume



Community Charges

	Estimated Service Charge Increase	
	2020	2021
Monona	15.6%	4.5%
Madison	7.7%	1.8%
Fitchburg	9.9%	8.0%
Middleton	8.9%	11.0%
DeForest	17.0%	14.6%
Windsor	42.7%	30.5%
Overall	9.7%	5.2%



Questions?