

2017 Performance Measurement Report

NapaSan Board of Directors April 4, 2018 Performance Measurement Report



Calendar Year 2017 Performance Measurements Using the "Effective Utility Management" Framework Collection - Tradment - Recovery - Rese Issue Date: April 4, 2018 www.NapaSan.com

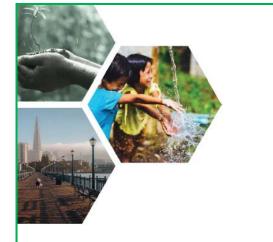
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Effective Utility Management

10 Attributes of Effectively Managed <u>Water Utilities</u>

- Product Quality
- •Customer Service
- •Employee Leadership and Development
- Operational Optimization
- •Financial Viability
- Infrastructure Stability
- Operational Resiliency
- Community Sustainability
- •Water Resource Adequacy
- Stakeholder Understanding & Support



Effective Utility Management

A Primer for Water and Wastewater Utilities





Summary

- 63 Performance Measures
 - ***** 54 (86%) "Satisfactory"

🔶 • 5 (8%) "Watch"

- 3 (5%) "Unsatisfactory"
- **(** 1 (2%) "No Measure / No Data"

Percentages do not add to 100% due to rounding



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Product Quality

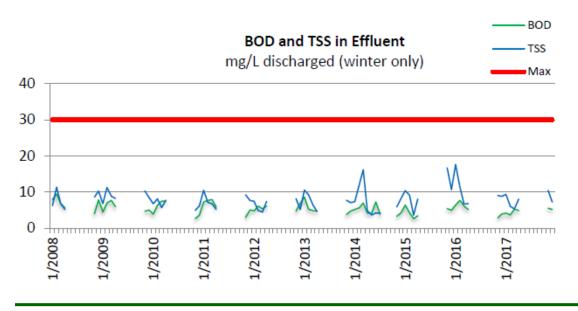
Attribute	Measurement	2017	Trend	Page
1. Product	1-NPDES Compliance:	+	+	17
Quality	Treatment for BOD and TSS Removal	×	×	
	2-NPDES Compliance:	+	+	18
	Total Allowable BOD and TSS	×	×	
	3-Sanitary Sewer Overflows (SSOs)		*	19
	4-Volume of Sewage Overflow		*	20
	5-Plugged Main Lines	*	*	21
	6-Recycled Water Quality	$\mathbf{\star}$		22



Product Quality

NPDES Compliance

Performance Data





Percentage of Days in Compliance

Year	Percent
2008	100%
2009	100%
2010	100%
2011	100%
2012	100%
2013	100%
2014	100%
2015	100%
2016	100%
2017	100%

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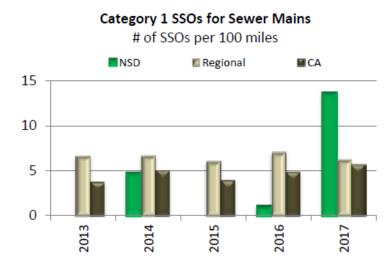
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Product Quality

Sanitary Sewer Overflows

Performance Data



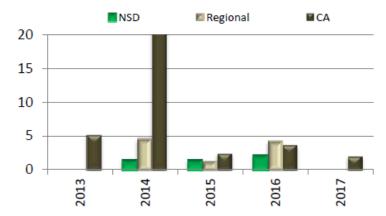
 Rating

 Current Year
 5-Year Trend

 Unsatisfactory
 Satisfactory

Category 1 SSOs for Sewer Laterals

of SSOs per 100 miles





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Product Quality

Recycled Water Quality

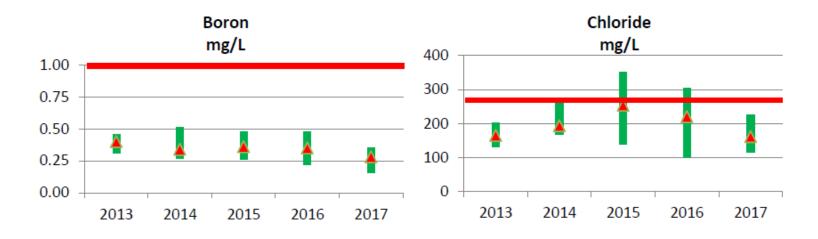


Performance Data

Indicates the range within the year

indicates annual average

Indicates the maximum concentration for sensitive grape species





Customer Service

Attribute	Measurement	2017	Trend	Page
2. Customer	1-Service Calls for District Plugged Laterals	*	\star	25
Service	2-Service Call Response Time	$\mathbf{\star}$	*	26
	3-Development Review Response Time	*	*	27
	4-Customer Satisfaction	\star	*	28

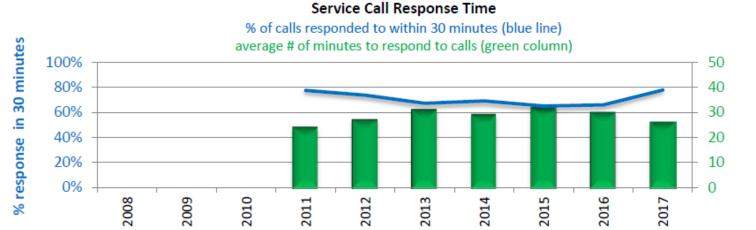


Customer Service

Service Call Response Time



Performance Data



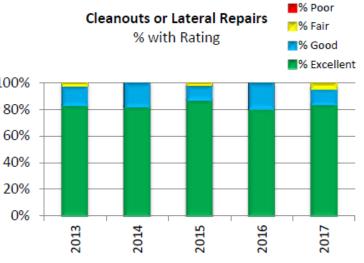


Customer Service

Customer Satisfaction



% Poor Plug-Up Calls % Fair % of Calls Displayed by Rating Good % Excellent 100% 100% 80% 80% 60% 60% 40% 40% 20% 20% 0% 0% 2015 2016 2013 2014 2017



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Performance Data



Employee & Leadership Development

Attribute	Measurement	2017	Trend	Page
3. Employee	1-Experience Turnover Rate	*	*	31
and	2-Employee Satisfaction	\rightarrow	\rightarrow	32
Leadership	3-Total Training Hours	0	0	33
Development	4-Online Safety Training Hours	*	*	34
	5-Succession Planning	*	X	35
	6-Institutional Knowledge Capture	\star	*	36



Operational Optimization

Attribute	Measurement	2017	Trend	Page
4. Operational	1-Electricity Self-Generation	*	*	39
Optimization	2-Electricity Consumption Efficiency	\star	*	40
	3-Chemical Consumption	*	*	41
	4-Planned Maintenance Ratio-Collections	$\mathbf{\star}$	*	42
	5-Planned Maintenance Ratio-Treatment	*	*	43
	Plant	~	\sim	



Operational Optimization

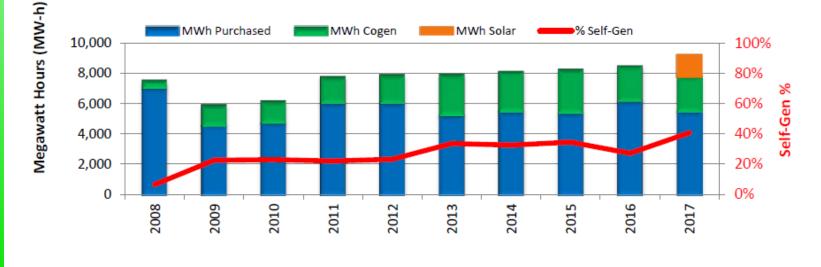
Electricity Self-Generation



Performance Data

Electricity Consumed by Source

in MW-h, and Cogeneration as a % of total electricity used



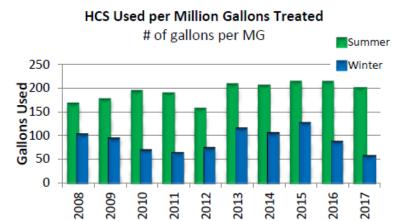


Operational Optimization

Chemical Consumption



Performance Data



Polymer Used per Million Gallons Treated # of gallons per MG Summer 200 Winter **Gallons** 150 100 50 0 2008 2009 2010 2012 2014 2015 2016 2011 2013 2017



Financial Viability

Attribute	Measurement	2017	Trend	Page
5. Financial	1-Operating Ratio	*	-	47
Viability	2-Current Ratio and Days Cash on Hand	*	*	48
	3-Capital Expenses Compared to	-	_	49
	Operating Expenses	×	×	
	4-Debt Service Coverage Ratio	\star	*	50
	5-Financial Procedure Integrity	$\mathbf{\star}$	*	51
	6-Bond Rating	*	*	52
	7-Financial Reserves	\star	\star	53



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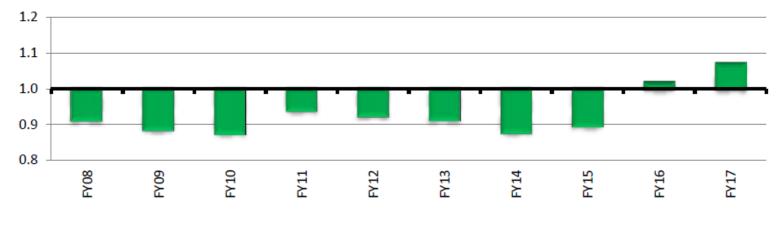
Financial Viability

• Operating Ratio



Performance Data



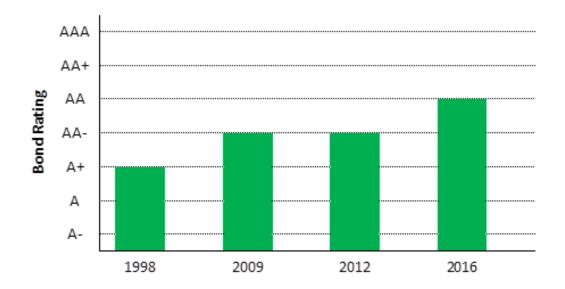




Financial Viability

Bond Rating





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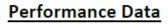
Infrastructure Stability

Attribute	Measurement	2017	Trend	Page
6. Infrastructure	1-Asset Inventory	- 🔶 -		57
Stability	2-Renewal & Replacement of Assets	*	*	58
	3-Sewer Main Condition Assessment	\mathbf{X}	*	59
	4-Sewer Main Line Cleaning	\mathbf{X}	*	60
	5-Food Service Establishment Inspections	*	*	61
	6-Sewer Main Renewal and Replacement	*	*	62
	7-Lower Sewer Lateral Renewal and	*	*	63
	Replacement	~		
	8-Sewer Partial or Total Collapse Rate	*	*	64
	9-Recycled Water Service Availability	*	\star	65



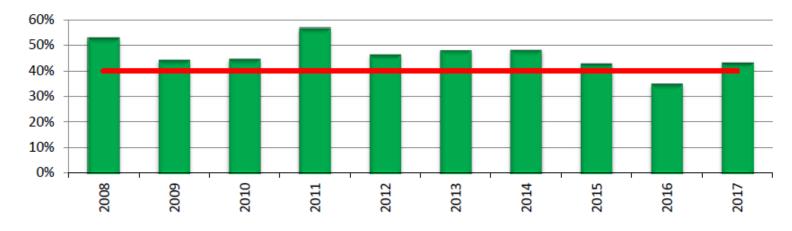
Infrastructure Stability

Sewer Main Line Cleaning





Sewer Main Line Cleaning % of line cleaned each year





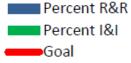
Infrastructure Stability

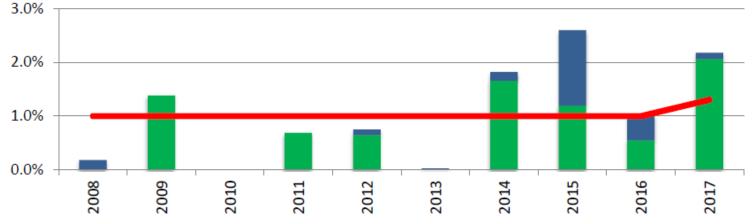
Sewer Main Rehabilitation

	Replacement
Year	Goal
2016	1.0%
2017	1.3%
2018	1.3%
2019	1.3%
2020	2.0%
2021	2.0%

Sewer Main Renewal & Replacement % of mains replaced or rehabilitated







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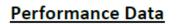
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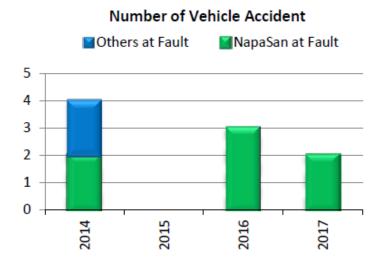


Attribute	Measurement	2017	Trend	Page
7. Operational	1-Total Recordable Incidence Rate	-	*	<mark>69</mark>
Resiliency	2-Vehicle Accident Rate	-		70
	3-Lost Time Hours	*	*	71
	4-Insurance Claims			72
	5-Experience Modification (XMOD) Rate		*	73
	6-Emergency Response Plans	*	*	74
	7-Uptime for Cogeneration Engine	*	*	75
	8-Uptime for Pumps at Pump Stations	\mathbf{X}	0	76
	9-Resiliency Under Emergency Conditions:	\star	*	77
	Power			
	10-Resiliency Under Emergency	*	*	78
	Conditions: Staff			
	11-Treatment Plant Capacity	*	\star	79



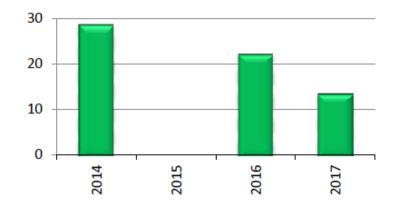
Vehicle Accident Rate





RatingCurrent Year4-Year TrendWatchWatch

Accident Incidence Rate # of Accidents per 1 million miles driven





Rating

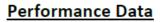
10-Year Trend

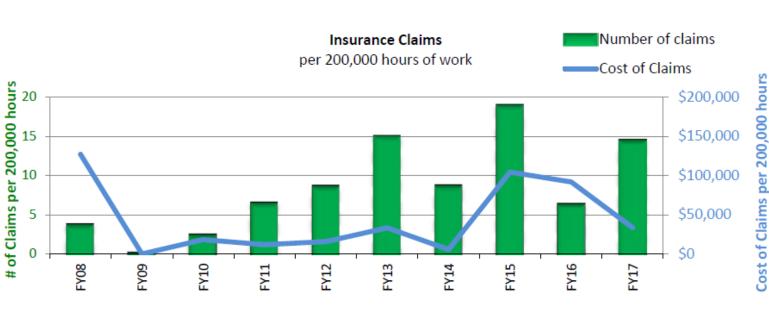
Watch

Current Year

Watch

Insurance Claims



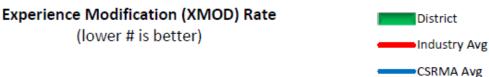


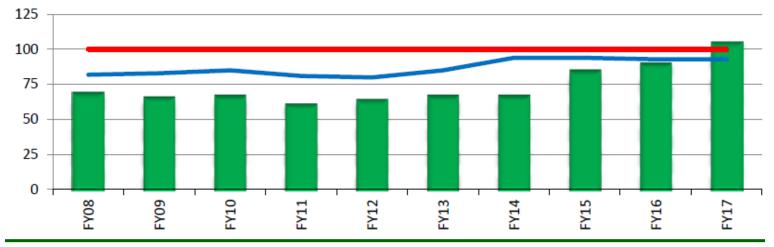


 Experience Modification (XMOD) Rate

Performance Data







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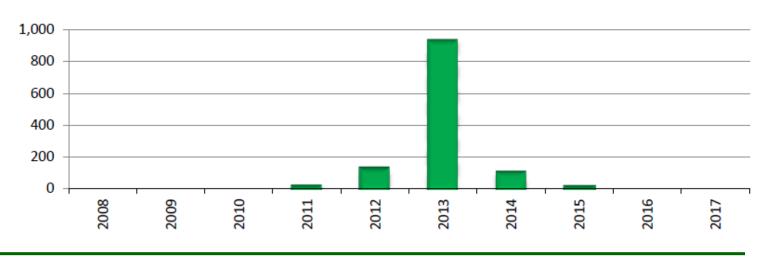
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Operational Resiliency

Lost Time Hours



Performance Data



Lost Time Hours



Community Sustainability

Attribute	Measurement	2017	Trend	Page
8. Community	1-Watershed-based Infrastructure	*	*	83
Sustainability	Planning	~		
	2-Green Infrastructure – Programs	*	*	84
	3-Green Infrastructure – New	\rightarrow	*	85
	Infrastructure	~	\sim	
	4-Greenhouse Gas Emissions – Purchased	*	*	86
	Energy	~	\sim	
	5-Digester Gas Beneficial Reuse	*	*	87
	6-Recycled Water Beneficial Reuse	$\mathbf{\star}$	\mathbf{X}	88
	7-Biosolids Beneficial Reuse	\star	*	89
	8-Sewer Service Charges - Affordability	*	*	90
	9-Low Income Billing Assistance	\star	\star	91



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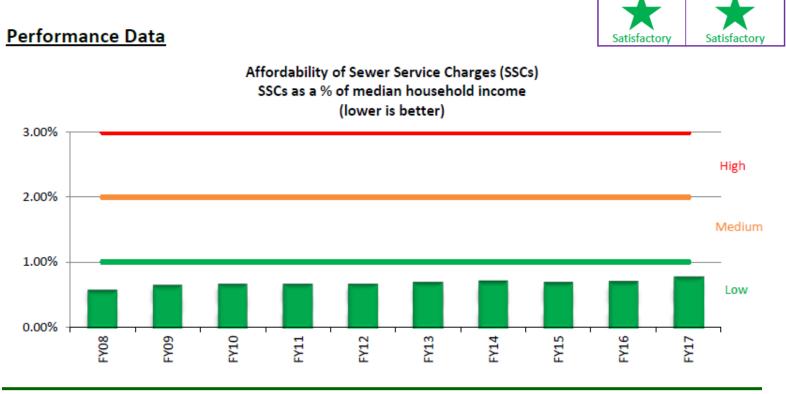
Community Sustainability

Sewer Service Charge Affordability

Rating

Current Year

10-Year Trend



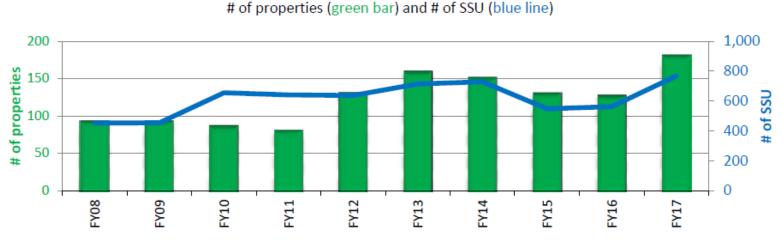


Community Sustainability

Low Income Billing Assistance



Performance Data



Low Income Assistance Program



Water Resource Adequacy

Attribute	Measurement	2017	Trend	Page
9. Water Resource	1-Recycled Water Supply Adequacy	*	*	95
Adequacy				



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Water Resource Adequacy

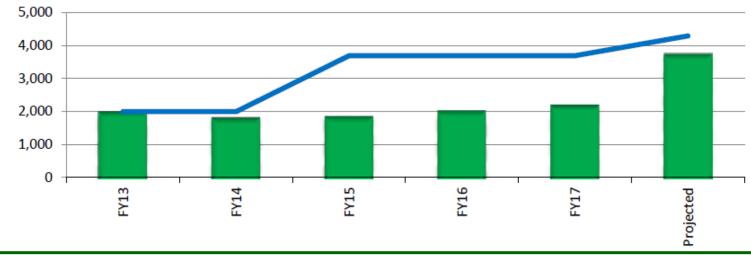
Recycled Water Supply



Performance Data

Recycled Water Supply Availability

Acre feet of RW delivered (green bar) and Acre feet of RW available (blue line)





Stakeholder Understanding & Support

Attribute	Measurement	2017	Trend	Page
10. Stakeholder	1-Stakeholder Consultation	*	*	99
Understanding &	2-Public Education Presentations	\mathbf{X}	*	100
Support	3-SSC Comparative Rate Rank	*	*	101
	4-Recycled Water Comparative Rate Rank	*	*	102
	5-Media/Press Coverage	$\mathbf{\star}$	$\mathbf{\star}$	103

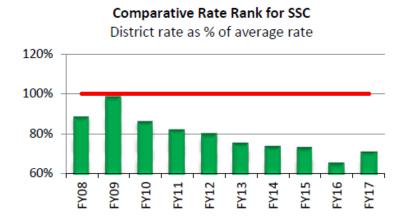


Stakeholder Understanding & Support

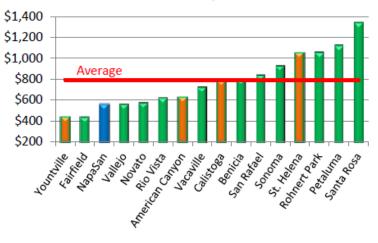
Comparative Rate Rank



Performance Data



SSC Rate Comparison



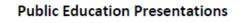


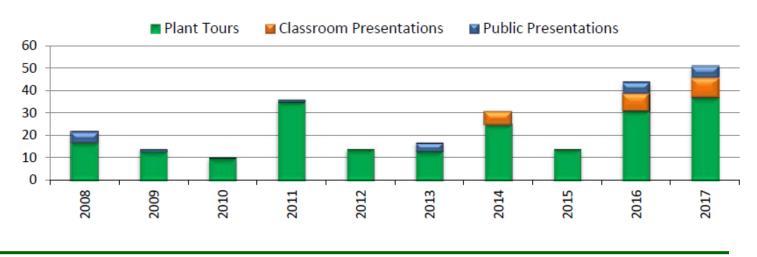
Stakeholder Understanding & Support

Public Education
 Presentations and Tours



Performance Data







Questions / Comments

Performance Measurement Report





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