



Preparing and Implementing an Asset Management Plan

What - Why - Benefits - Regulations - Compliance

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NJ WATER QUALITY ACCOUNTABILITY ACT

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Presentation Topics

- Asset Management – what, why, how
- Regulation and Compliance
- NJDEP Asset Management Program
- How to get it done
- Example – Asset Inventory/Condition
- Remaining useful life
- Asset management costs
- Conclusion

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Do you know what the remaining useful life of your water or wastewater pipes is?

Yes

No

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What is the status of your asset management plan?

Haven't started

Working on it


Completed

Actively implementing it

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Asset Management

Consistent and programmed reinvestment
Reduction of risk to consumers and environment
Sustainability – operations
Maintaining asset remaining useful life



What	Why	How
Managing infrastructure capital assets to minimize total cost of owning and operations on a sustained level	Financial and management decision making – reliable operations – regulatory compliance - efficiency	Understanding – current state of assets – asset criticality and sustainability – life cycles – replacement strategy

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Regulations and Compliance


Federal	State
<p>GASB 34</p> <ul style="list-style-type: none"> • Accrual based accounting • Value of infrastructure and cost of deferred maintenance – asset management • Capital contributions • Circa 2002 compliance 	<p>NJ – Water Quality Accountability Act</p> <ul style="list-style-type: none"> • Compliance 12 months after passage of law • Standards – BPU/AWWA/EPA • DIY

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NJDEP Asset Management Program Components

- Asset inventory/mapping and condition assessment
- Level of service
- Criticality/prioritization assessment
- Life cycle costs
- Long term funding strategy
- Asset management plan



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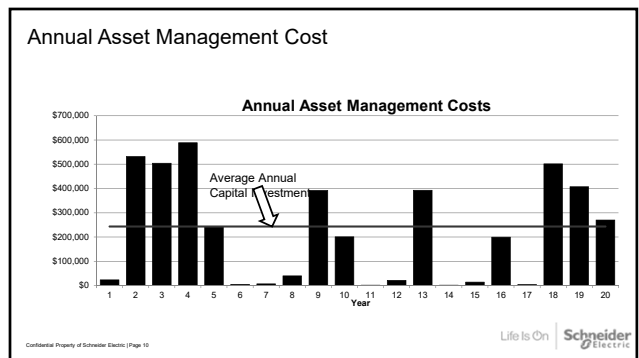
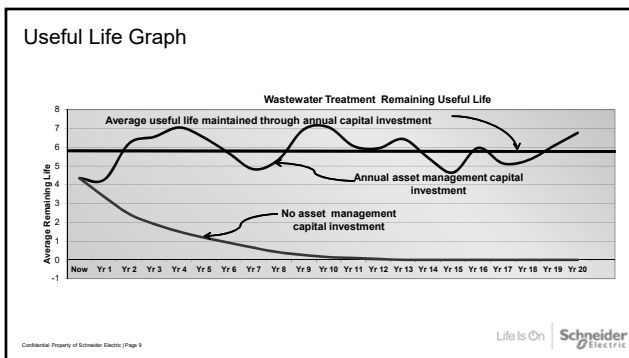
How To Get It Done

Simplicity and clear objectives

<p>Complicated Approach</p> <ul style="list-style-type: none"> • Engagement of third party advisor • Extended involvement and time commitment • Conclusions may not be desirable 	<p>Simple Approach</p> <ul style="list-style-type: none"> • DIY • Leverage resident knowledge of systems • Optimize and prioritize based on experience
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} Both work – Select what fits!
Cost and time considerations

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Example Asset Inventory

Asset ID	Asset Name	Asset Type	Asset Class	Asset Location	Asset Status	Asset Age	Asset Value	Asset Condition	Asset Notes
1	Asset 1	Asset Type	Asset Class	Asset Location	Asset Status	Asset Age	Asset Value	Asset Condition	Asset Notes
2	Asset 2	Asset Type	Asset Class	Asset Location	Asset Status	Asset Age	Asset Value	Asset Condition	Asset Notes
3	Asset 3	Asset Type	Asset Class	Asset Location	Asset Status	Asset Age	Asset Value	Asset Condition	Asset Notes
4	Asset 4	Asset Type	Asset Class	Asset Location	Asset Status	Asset Age	Asset Value	Asset Condition	Asset Notes
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13	Asset 13	Asset Type	Asset Class	Asset Location	Asset Status	Asset Age	Asset Value	Asset Condition	Asset Notes
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15	Asset 15	Asset Type	Asset Class	Asset Location	Asset Status	Asset Age	Asset Value	Asset Condition	Asset Notes
16	Asset 16	Asset Type	Asset Class	Asset Location	Asset Status	Asset Age	Asset Value	Asset Condition	Asset Notes
17	Asset 17	Asset Type	Asset Class	Asset Location	Asset Status	Asset Age	Asset Value	Asset Condition	Asset Notes
18	Asset 18	Asset Type	Asset Class	Asset Location	Asset Status	Asset Age	Asset Value	Asset Condition	Asset Notes
19	Asset 19	Asset Type	Asset Class	Asset Location	Asset Status	Asset Age	Asset Value	Asset Condition	Asset Notes
20	Asset 20	Asset Type	Asset Class	Asset Location	Asset Status	Asset Age	Asset Value	Asset Condition	Asset Notes

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Example Asset Inventory

Asset ID	Description	Location	Manufacturer	Model	Year	Capacity	Serial	Notes
1001	Transformer	Substation A	GE	1000	2015	500kVA	12345	
1002	Transformer	Substation B	GE	1000	2015	500kVA	12346	
1003	Transformer	Substation C	GE	1000	2015	500kVA	12347	
1004	Transformer	Substation D	GE	1000	2015	500kVA	12348	
1005	Transformer	Substation E	GE	1000	2015	500kVA	12349	
1006	Transformer	Substation F	GE	1000	2015	500kVA	12350	
1007	Transformer	Substation G	GE	1000	2015	500kVA	12351	
1008	Transformer	Substation H	GE	1000	2015	500kVA	12352	
1009	Transformer	Substation I	GE	1000	2015	500kVA	12353	
1010	Transformer	Substation J	GE	1000	2015	500kVA	12354	

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Example Asset Inventory

Asset ID	Description	Location	Manufacturer	Model	Year	Capacity	Serial	Notes
1011	Transformer	Substation K	GE	1000	2015	500kVA	12355	
1012	Transformer	Substation L	GE	1000	2015	500kVA	12356	
1013	Transformer	Substation M	GE	1000	2015	500kVA	12357	
1014	Transformer	Substation N	GE	1000	2015	500kVA	12358	
1015	Transformer	Substation O	GE	1000	2015	500kVA	12359	
1016	Transformer	Substation P	GE	1000	2015	500kVA	12360	
1017	Transformer	Substation Q	GE	1000	2015	500kVA	12361	
1018	Transformer	Substation R	GE	1000	2015	500kVA	12362	
1019	Transformer	Substation S	GE	1000	2015	500kVA	12363	
1020	Transformer	Substation T	GE	1000	2015	500kVA	12364	

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Remaining Useful Life

Asset ID	Description	Location	Manufacturer	Model	Year	Capacity	Serial	Notes
1001	Transformer	Substation A	GE	1000	2015	500kVA	12345	
1002	Transformer	Substation B	GE	1000	2015	500kVA	12346	
1003	Transformer	Substation C	GE	1000	2015	500kVA	12347	
1004	Transformer	Substation D	GE	1000	2015	500kVA	12348	
1005	Transformer	Substation E	GE	1000	2015	500kVA	12349	
1006	Transformer	Substation F	GE	1000	2015	500kVA	12350	
1007	Transformer	Substation G	GE	1000	2015	500kVA	12351	
1008	Transformer	Substation H	GE	1000	2015	500kVA	12352	
1009	Transformer	Substation I	GE	1000	2015	500kVA	12353	
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Remaining Useful Life

Asset ID	Description	Location	Manufacturer	Model	Year	Capacity	Serial	Notes
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1012	Transformer	Substation L	GE	1000	2015	500kVA	12356	
1013	Transformer	Substation M	GE	1000	2015	500kVA	12357	
1014	Transformer	Substation N	GE	1000	2015	500kVA	12358	
1015	Transformer	Substation O	GE	1000	2015	500kVA	12359	
1016	Transformer	Substation P	GE	1000	2015	500kVA	12360	
1017	Transformer	Substation Q	GE	1000	2015	500kVA	12361	
1018	Transformer	Substation R	GE	1000	2015	500kVA	12362	
1019	Transformer	Substation S	GE	1000	2015	500kVA	12363	
1020	Transformer	Substation T	GE	1000	2015	500kVA	12364	

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Remaining Useful Life

Asset ID	Description	Location	Manufacturer	Model	Year	Capacity	Serial	Notes
1021	Transformer	Substation U	GE	1000	2015	500kVA	12365	
1022	Transformer	Substation V	GE	1000	2015	500kVA	12366	
1023	Transformer	Substation W	GE	1000	2015	500kVA	12367	
1024	Transformer	Substation X	GE	1000	2015	500kVA	12368	
1025	Transformer	Substation Y	GE	1000	2015	500kVA	12369	
1026	Transformer	Substation Z	GE	1000	2015	500kVA	12370	
1027	Transformer	Substation AA	GE	1000	2015	500kVA	12371	
1028	Transformer	Substation AB	GE	1000	2015	500kVA	12372	
1029	Transformer	Substation AC	GE	1000	2015	500kVA	12373	
1030	Transformer	Substation AD	GE	1000	2015	500kVA	12374	

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Asset Management Plan Summary

Asset ID	Description	Location	Manufacturer	Model	Year	Capacity	Serial	Notes
1031	Transformer	Substation AE	GE	1000	2015	500kVA	12375	
1032	Transformer	Substation AF	GE	1000	2015	500kVA	12376	
1033	Transformer	Substation AG	GE	1000	2015	500kVA	12377	
1034	Transformer	Substation AH	GE	1000	2015	500kVA	12378	
1035	Transformer	Substation AI	GE	1000	2015	500kVA	12379	
1036	Transformer	Substation AJ	GE	1000	2015	500kVA	12380	
1037	Transformer	Substation AK	GE	1000	2015	500kVA	12381	
1038	Transformer	Substation AL	GE	1000	2015	500kVA	12382	
1039	Transformer	Substation AM	GE	1000	2015	500kVA	12383	
1040	Transformer	Substation AN	GE	1000	2015	500kVA	12384	

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is the primary obstacle to implementing your asset management

Limited funding	
Uncertain direction or priority	
Not enough time	
Other	
None	

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Energy Savings Improvement Program (ESIP)

Before

Energy + O&M Costs

After

Excess savings
ESIP Funding
Energy + O&M Costs

↑ Verified Savings

PL 2009, Chapter 4 and PL 2012 Chapter 55

- Alternative project delivery method
- Turn-key (design-build)
- 3rd party financed over 15-20 years
- Focus: asset management, process optimization, regulatory compliance, energy efficiency, and sustainability


Process

- Local Government Energy Audit
- Request for Proposals (RFP)
- Investment Grade Audit (Project Development)
- 3rd Party & BPU Review, Financing
- Construction & Commissioning
- Financial Guarantee, Measurement & Verification (optional)


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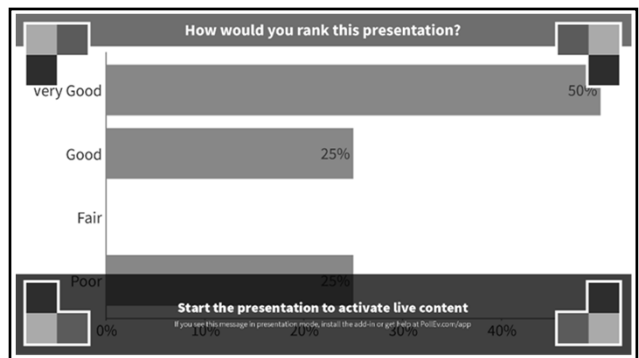
Resources

Regulation:
[Water Quality Accountability Act \(NJ\)](#)
[GASB 34 \(Federal\)](#)

NJDEP Resources:
[Asset Management Policy Program site](#)
[Guidance & Best Practices](#)
[Technical Guidance](#)

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Do you have any other feedback, questions, or suggestions?

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