
Fundamentals of Asset Management

Step 9. Determine Funding Strategy

A Hands-On Approach

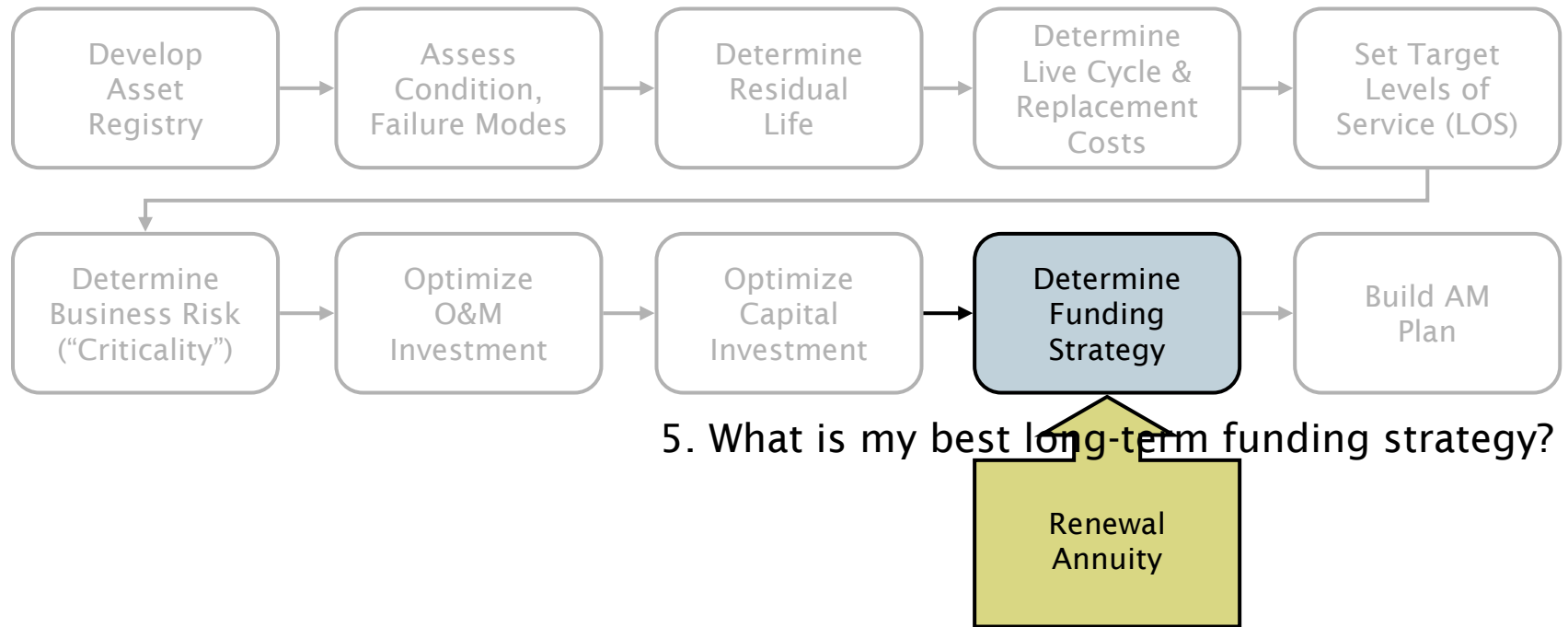
Tom's bad day...



Fifth of 5 core questions

5. What is my best long-term funding strategy?

AM plan 10-step process

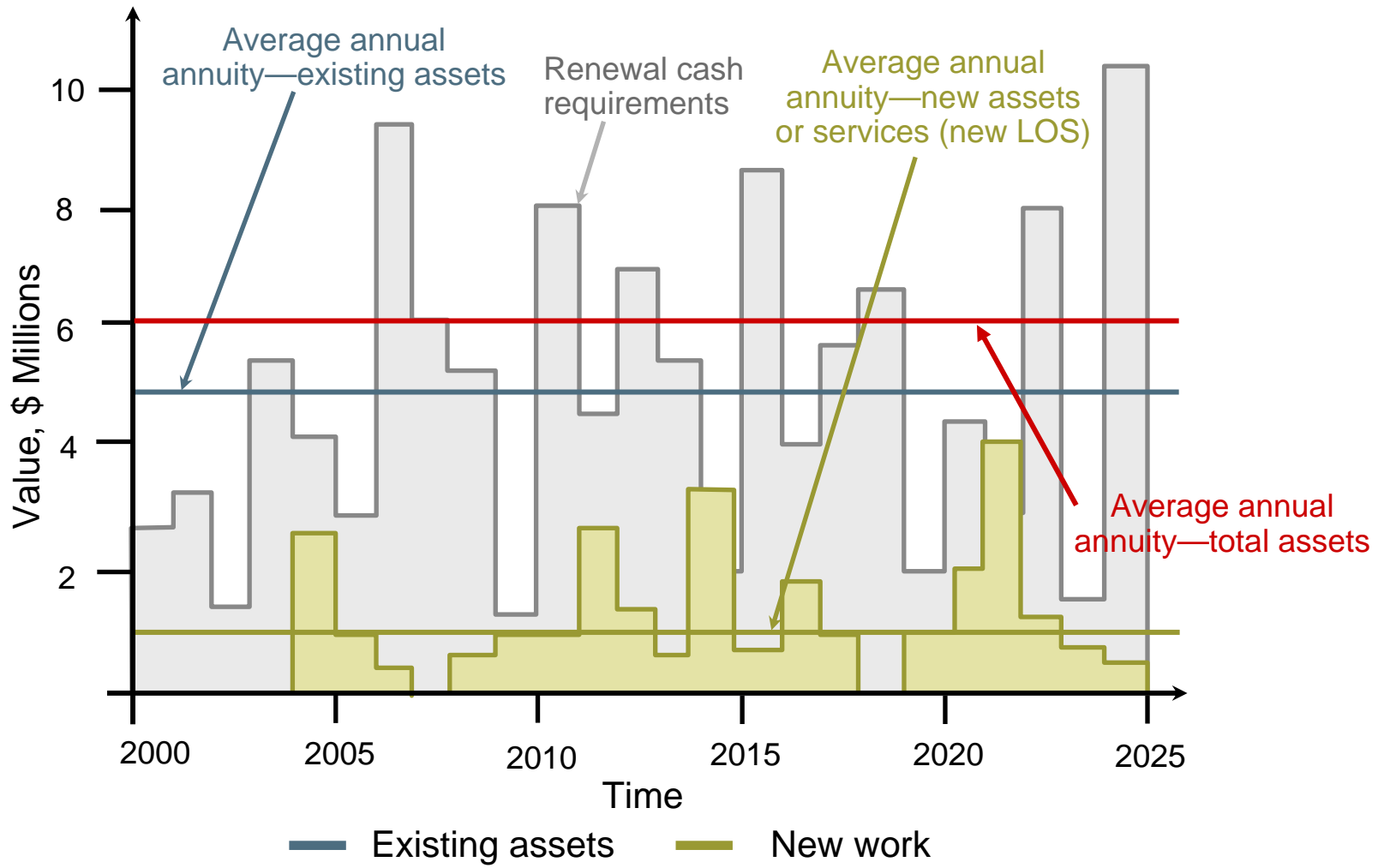


Asset management investment planning elements

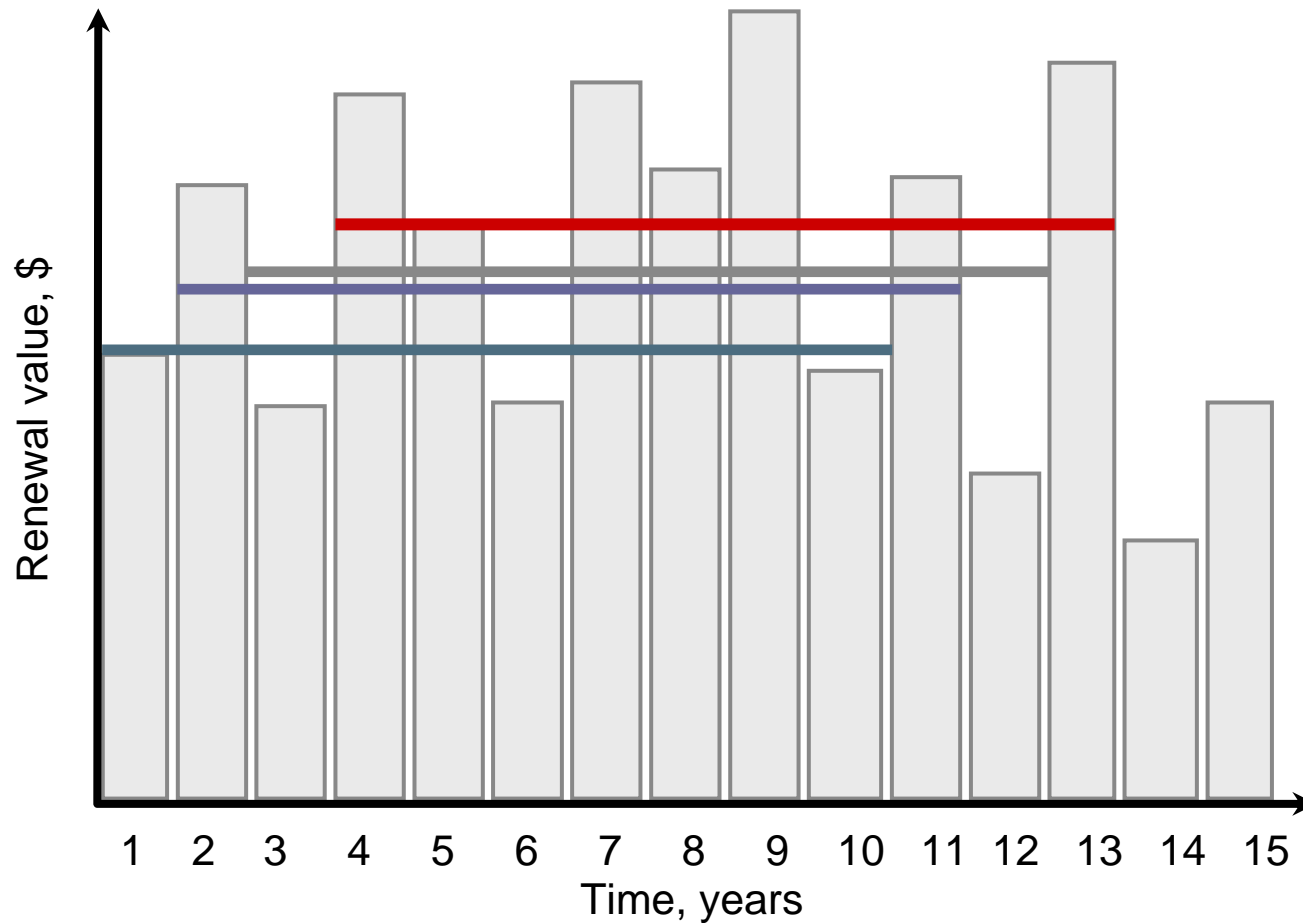
- Capital investment
 - Renewal (repair, refurbish, replace)
 - Augmentation (capacity, functionality)
- Maintenance investment
 - Planned
 - Preventive
 - Predictive
 - Corrective
 - Unplanned
- Operations investment
 - Operations cost trends

Life-cycle projected costs

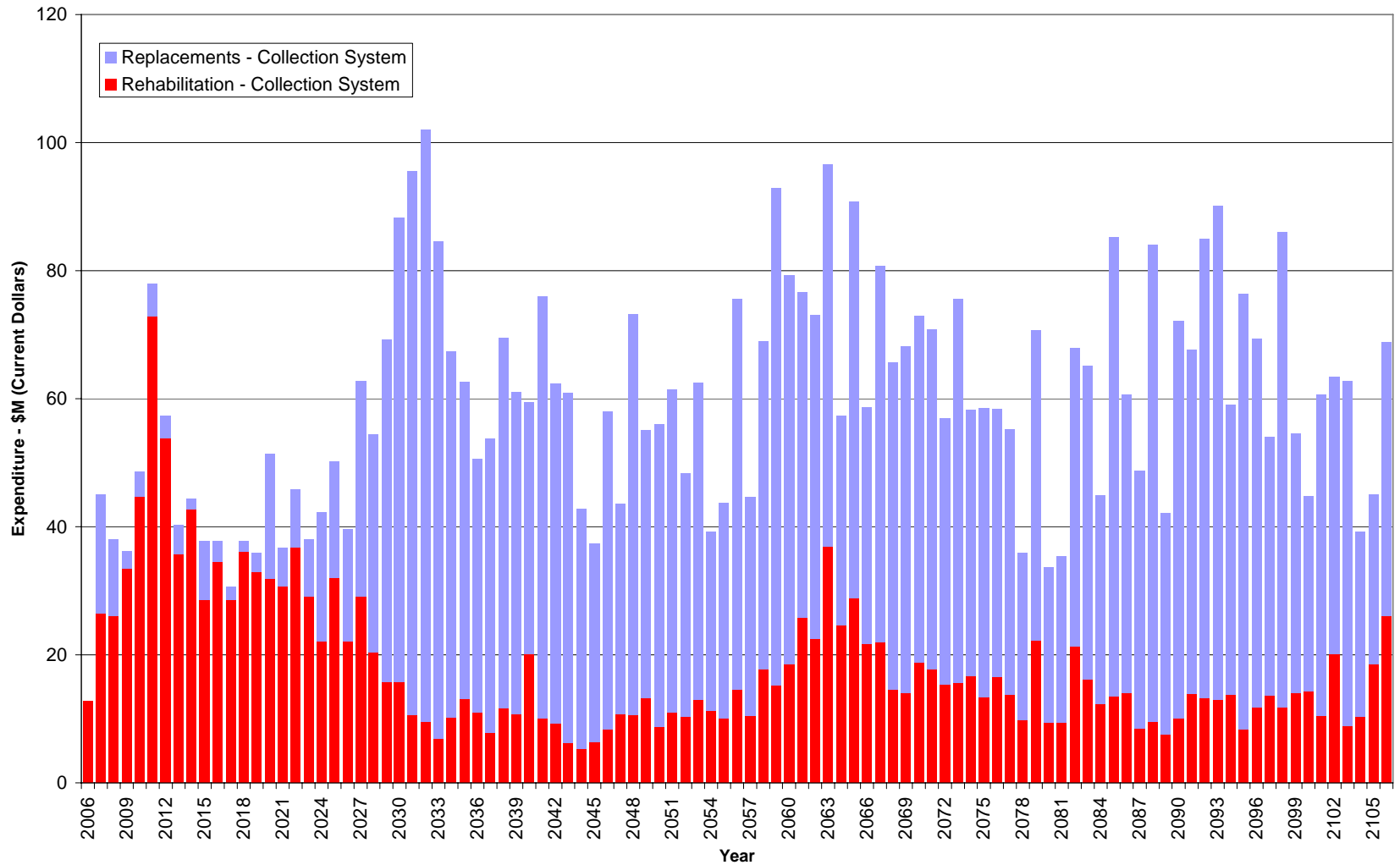
Renewal programs



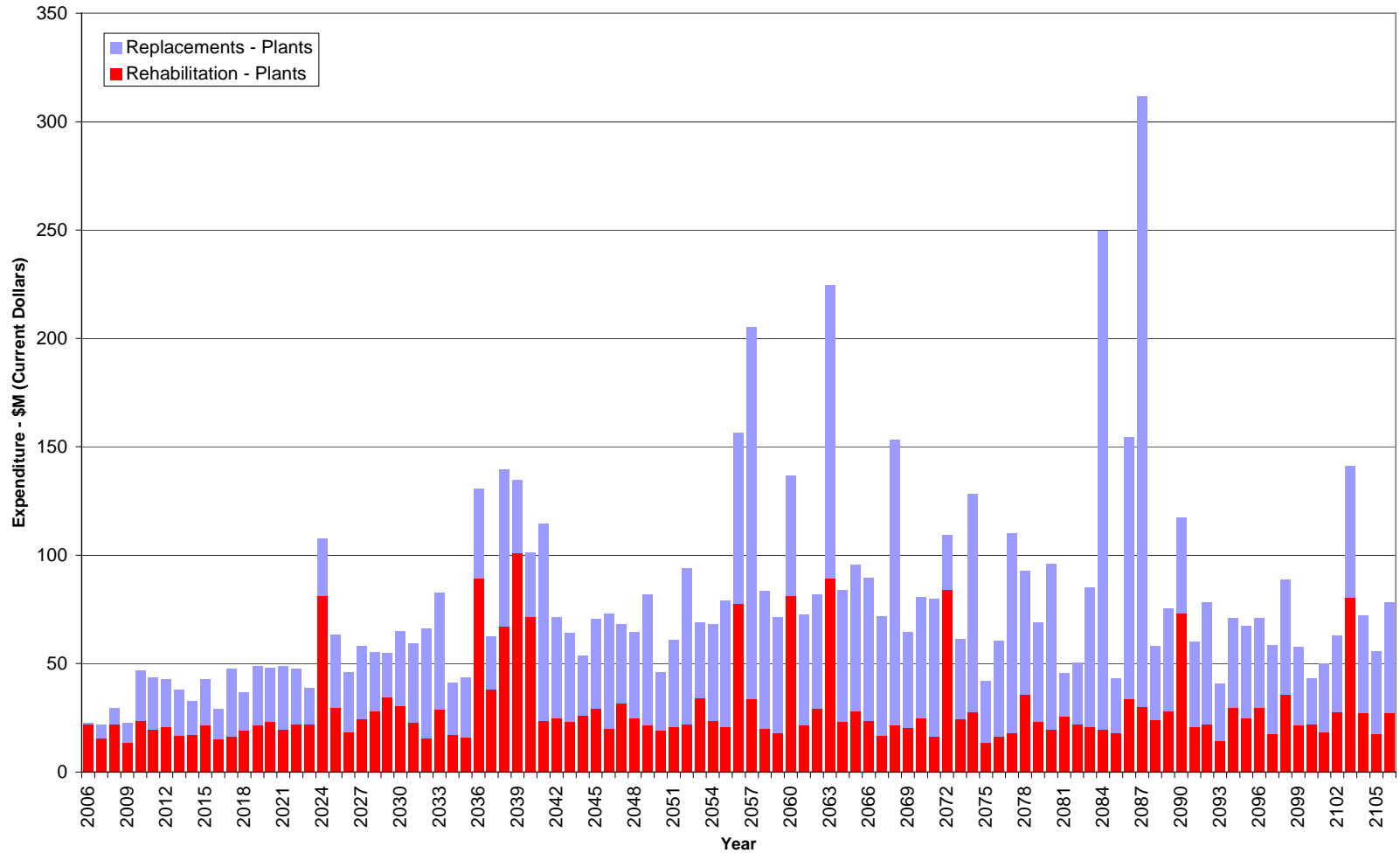
Rolling annuities – 10 year example



Renewal - Collection

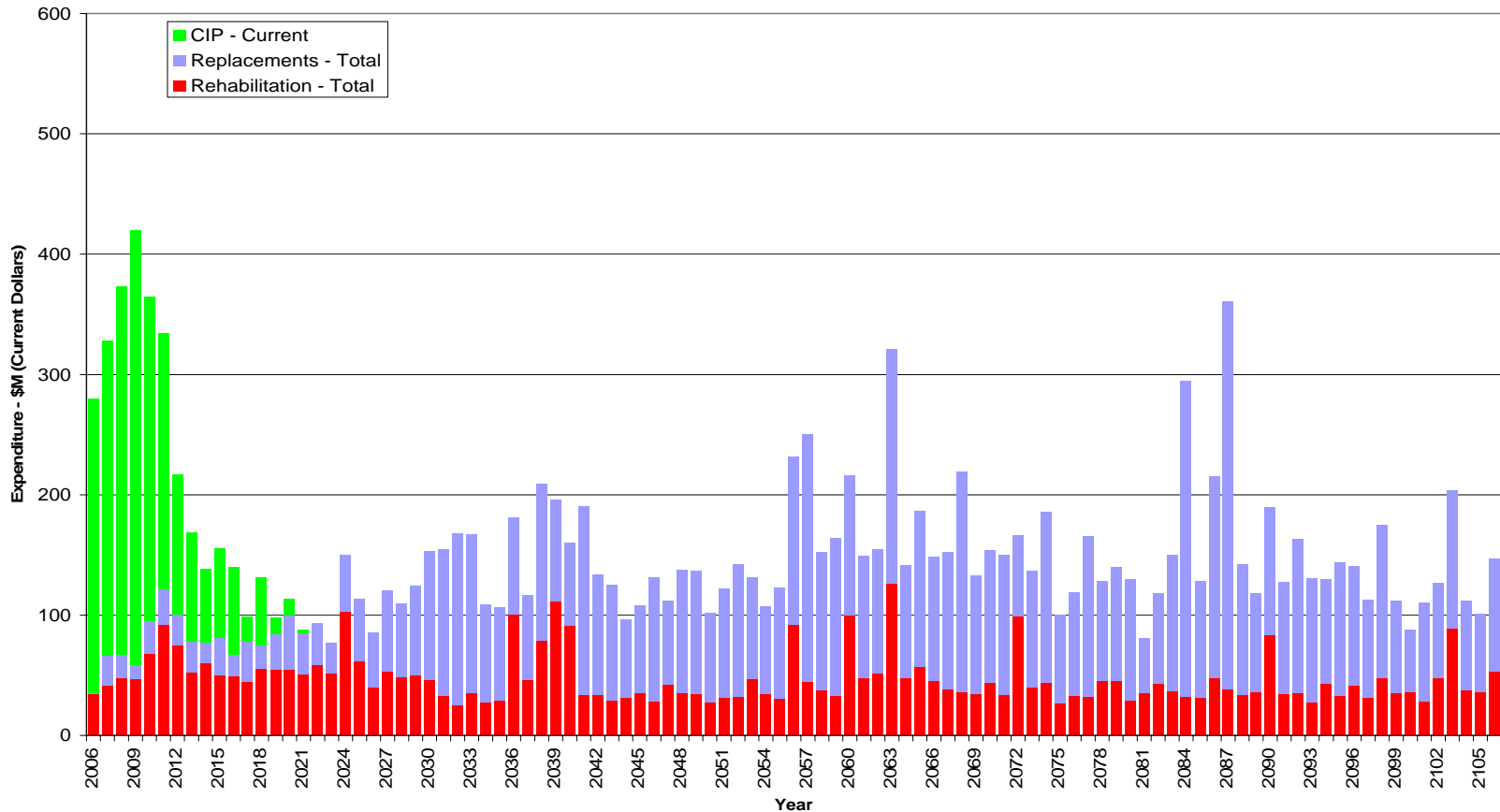


Renewal – Treatment Plants

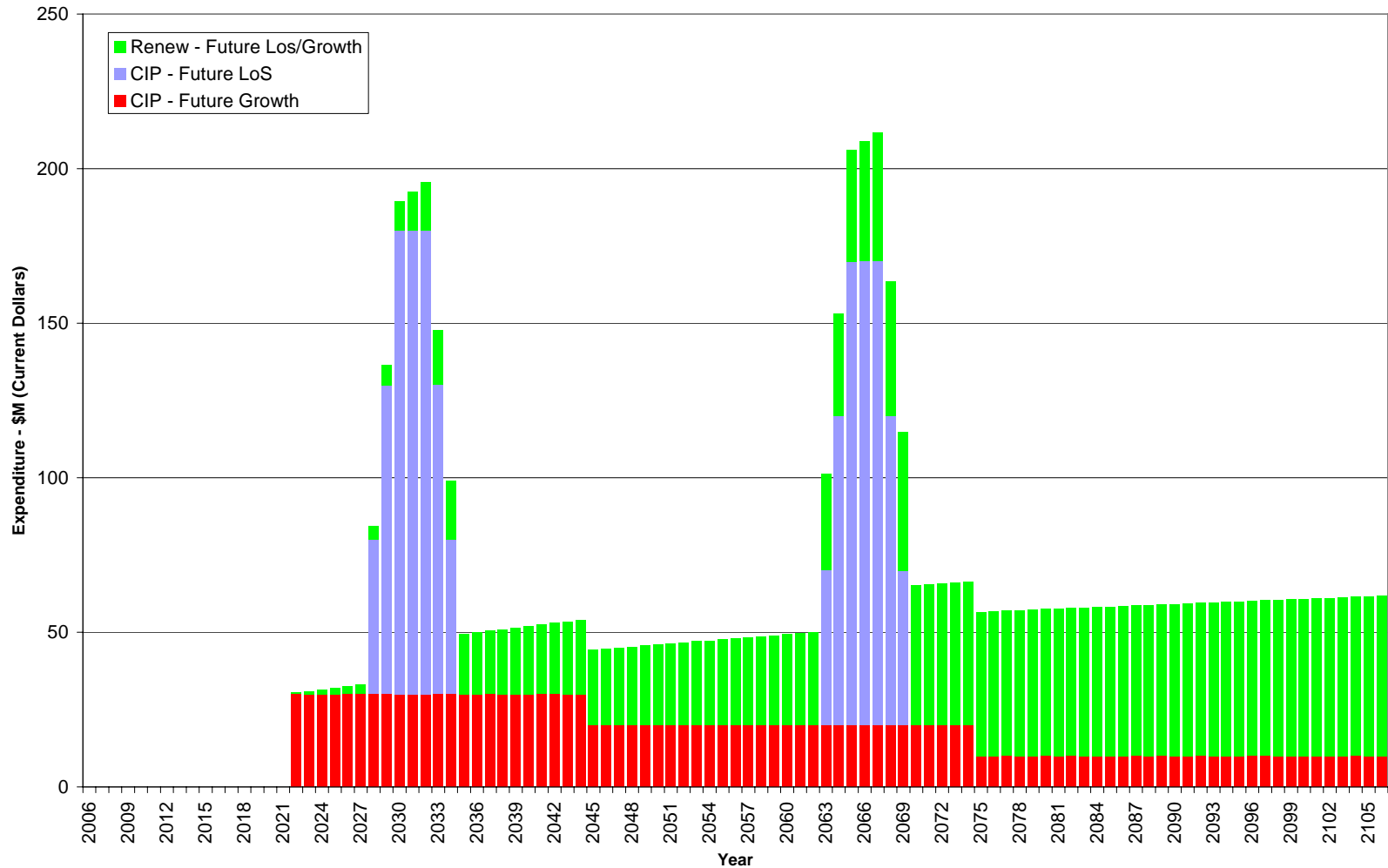


Total projected renewal costs – “legacy costs”

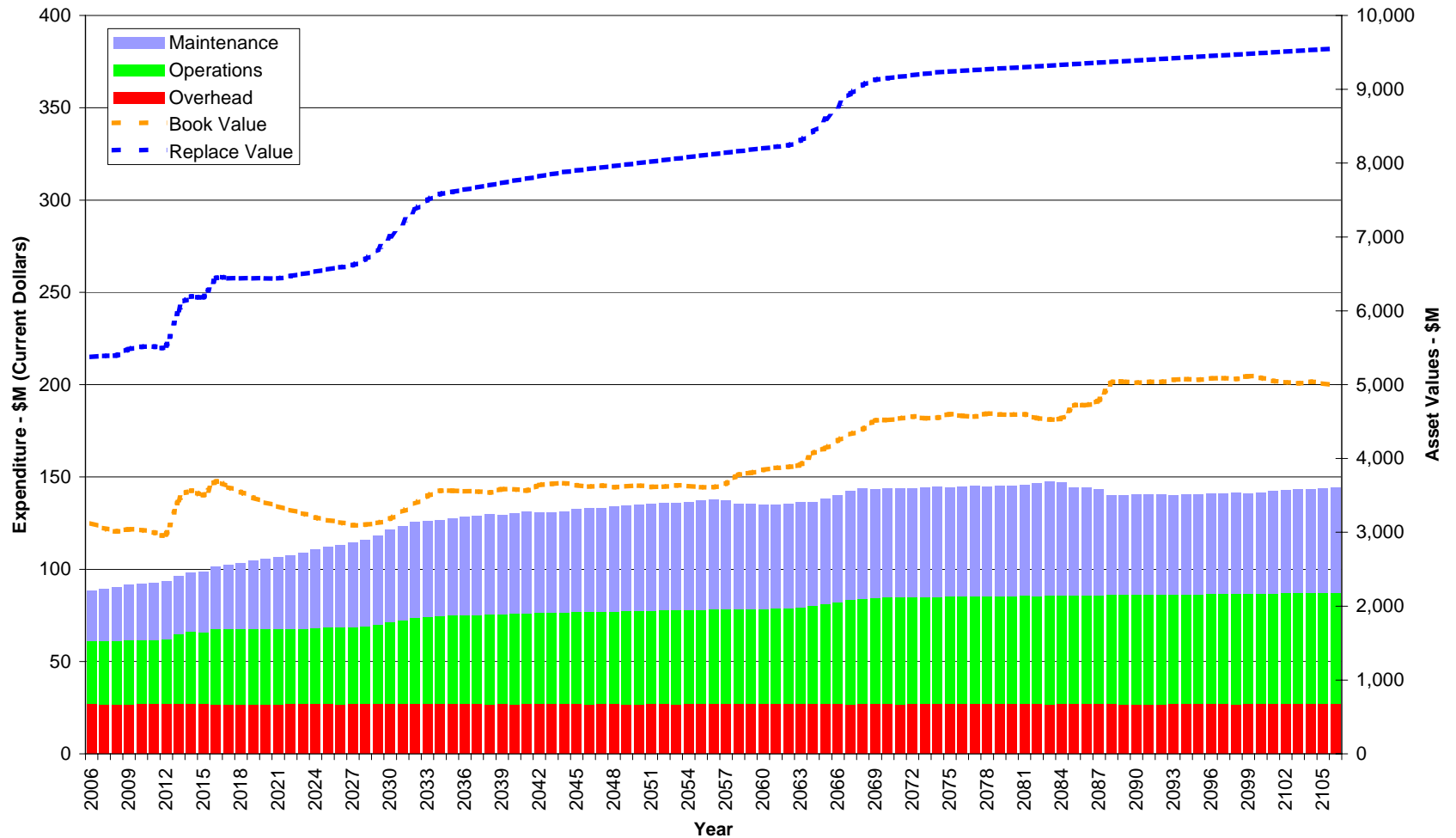
Predicted future renewal of all existing assets



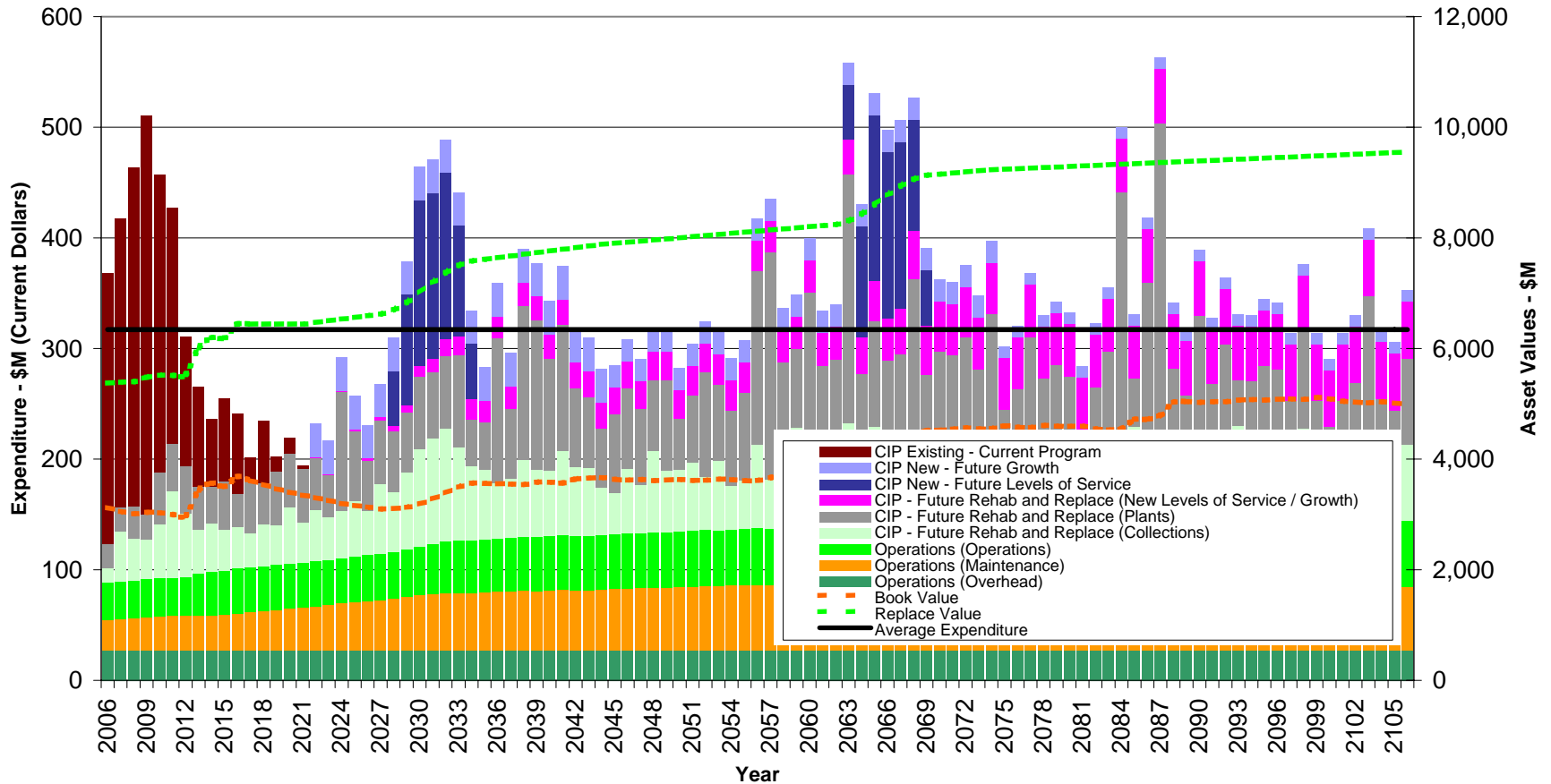
Future Growth and LOS



Operations and Maintenance



Total projected (optimized) costs



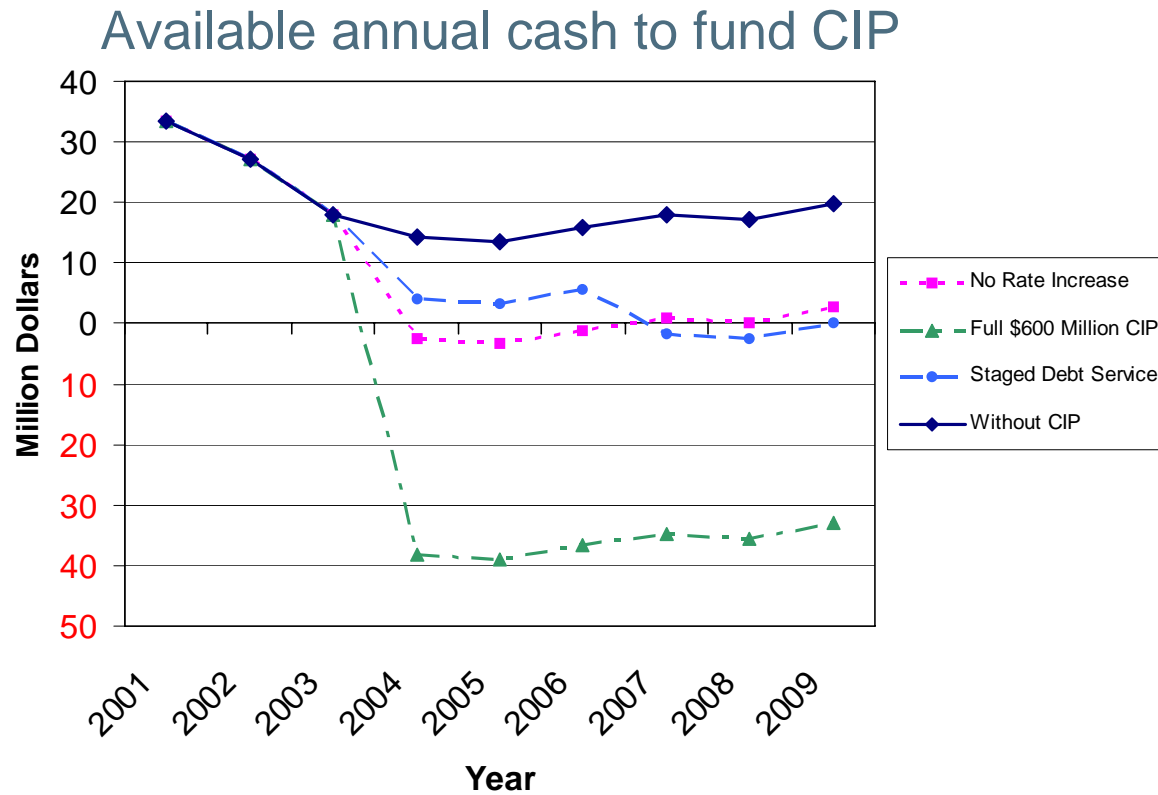
Financing strategies

- “Pay as you go” – current revenues
 - Dedicated reserve account (‘hands off’)
 - Replacement/renewal recovery fee embedded in rate structure
- “Pay as you use” – debt service
 - “slice of debt service”
 - “intergenerational equity”
 - Interest as an expense that reduces available capital

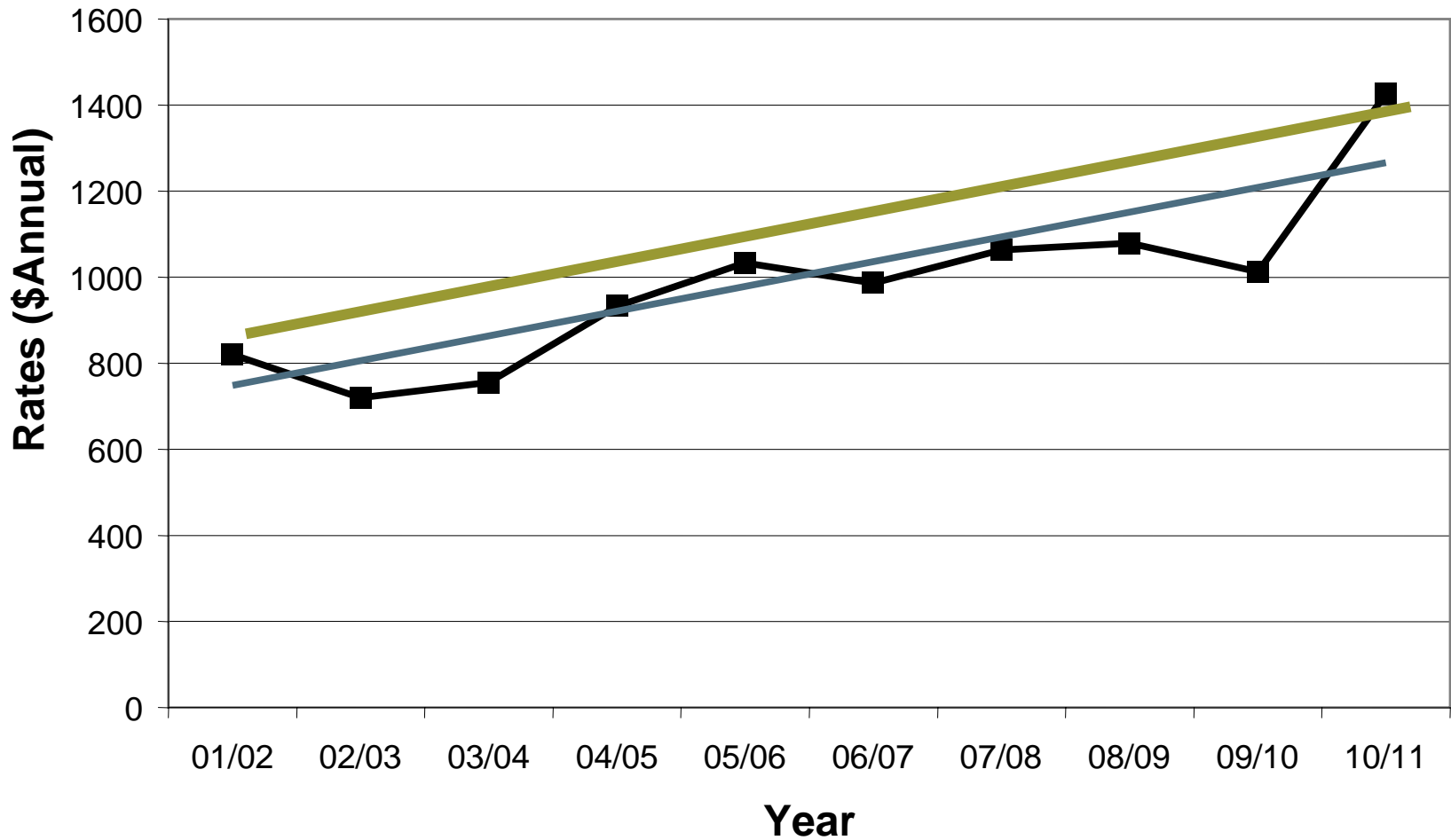
Cash flow projections

Microsoft Excel - 2003 CIP Cash-NOI Projections-Bill.xls									
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	2001	2002	2003	2004	2005	2006	2007	2008	2009
Water and Sewer CIP-based NOI Projections									
Fund 201 revenues									
<i>Fund 201 subtotal</i>	\$88,482,397	\$95,049,926	\$95,662,617	\$99,584,413	\$103,666,988	\$107,916,933	\$112,341,109	\$125,125,161	\$130,254,841
Fund 203 revenues									
<i>subtotal 203 revenues</i>	\$7,538,877	\$5,674,403	\$6,429,081	\$7,856,104	\$7,991,148	\$8,131,593	\$8,277,656	\$8,429,561	\$8,387,543
subtotal interest income	\$9,822,418	\$6,056,600	\$3,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Total 201 and 203 revenues	\$105,843,692	\$106,780,929	\$105,091,698	\$109,440,517	\$113,658,136	\$118,048,526	\$122,618,765	\$135,554,722	\$140,642,384
<LESS> TOTAL PROJECTED EXPENSES	\$74,802,839	\$77,319,840	\$82,626,226	\$90,619,705	\$95,605,227	\$97,771,069	\$100,319,584	\$114,059,922	\$116,468,325
<LESS> MANDATORY BOND COVERAGE RESERVE	\$2,445,205	\$2,445,205	\$2,445,300	\$2,445,300	\$2,445,600	\$2,444,600	\$2,445,200	\$2,445,000	\$2,445,400
<LESS> Contingency	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Revenue Coverage / Shortfall	33,486,688	27,015,854	18,020,172	14,375,513	13,667,468	15,832,857	17,853,561	17,043,806	15,728,658
New Debt Service Impact - Scenario 1 - NRI									
Additional Debt Service				\$15,376,425	\$15,376,425	\$15,376,425	\$15,376,425	\$15,376,425	\$15,376,425
Additional Bond Coverage Reserve Requirement				\$1,537,643	\$1,537,643	\$1,537,643	\$1,537,643	\$1,537,643	\$1,537,643
<ADD> Total New (additional) Disbursements				\$16,914,068	\$16,914,068	\$16,914,068	\$16,914,068	\$16,914,068	\$16,914,068
Revised Coverage/Shortfall (reserve drawdown)	33,486,688	27,015,854	18,020,172	\$2,838,555	\$3,366,633	\$1,681,111	\$535,514	\$135,733	\$2,814,531
New Debt Service Impact - Scenario 2 - ALL CIP									
Additional Debt Service				\$47,800,000	\$47,800,000	\$47,800,000	\$47,800,000	\$47,800,000	\$47,800,000
Additional Bond Coverage Reserve Requirement				\$4,780,000	\$4,780,000	\$4,780,000	\$4,780,000	\$4,780,000	\$4,780,000
<ADD> Total New (additional) Disbursements				\$52,580,000	\$52,580,000	\$52,580,000	\$52,580,000	\$52,580,000	\$52,580,000
Revised Coverage/Shortfall (reserve drawdown)	33,486,088	27,015,854	18,020,172	\$38,204,467	\$38,572,551	\$36,747,043	\$34,726,015	\$35,530,206	\$32,851,342
New Debt Service Impact - Scenario 3 - Staged DS									
Additional Debt Service				\$9,375,000	\$9,375,000	\$9,375,000	\$17,879,564	\$17,879,564	\$17,879,564
Additional Bond Coverage Reserve Requirement				\$937,500	\$937,500	\$937,500	\$1,787,956	\$1,787,956	\$1,787,956
<ADD> Total New (additional) Disbursements				\$10,312,500	\$10,312,500	\$10,312,500	\$19,667,520	\$19,667,520	\$19,667,520
Revised Coverage/Shortfall (reserve drawdown)	33,486,088	27,015,854	18,020,172	\$4,663,613	\$3,294,365	\$5,520,457	\$1,813,535	\$2,617,726	\$61,138
Parameters:									
Growth in customer-base									
Sewer		2.5%	3.0%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%
Water		4.0%	4.5%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%
Connection fee rate increase			100.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Rate Increase Assumptions									
Sewer				0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Water				0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
South Fulton water Purchase in 2008								125%	
** Cauley creek Reuse revenue is based on Cont									

Cash impact by scenario



Projected rates over time by financing scenario



Key points from this session

What is my best long term funding strategy?

Key Points:

- “Full economic cost” is the foundation concept from which effective financial decision-making is made.
- Replacement and refurbishment cost, not historic depreciation, is key to good financial decision-making
- “Long-term Annualized Renewal Annuity” provides the baseline funding for sustained performance.
- Telling the asset consumption “story” in simple, effective, big-picture terms sets the stage for LOS discussion and business risk based decision-making.

Associated Techniques:

- Valuation techniques
- Net Present Value
- Optimized replacement cost tables
- Optimized portfolio-wide, life-cycle financial projections
- Capital investment strategies
- Telling the story with confidence

Tom's spreadsheet

Microsoft Excel - EPA Seminar Master.xls

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Asset Register and Hierarchy					What is the State of My Assets?			Required LOS?		Which Are Most "Critical"?		
Installed Date	Asset Class	Original Cost	Estimated Effective Life	Condition Rating	Annual Dep	Accum Dep	Current LOS?	Minimum Condition	Backup Reduction (Redundancy)	Probability of Failure	Consequence of Failure	
Year		\$	Years	1 to 10	\$	\$			%	Rating	1 to 10	
Act or Est	Tab A	Act or Est	Calculated	Tab A	Calculated	Calculated		Tab A	Tab D	Calculated	Tab C	
2006	2006											
Level 1	Level 2	Level 3	Level 4	Level 5								
Sanitation System	Disposal System	Treatment Plants	Collection Systems									
		Sewer Mains	Pump Station									
		Incoming Sewer										
		Pipes							Avg 1500 cfm; peak 2100cfm			
1963	3	\$ 1,725	100	6	\$ 17	\$ 742		2	0%	4	5	
1963	3	\$ 340	100	5	\$ 3	\$ 146		2	0%	4	5	
1986	5	\$ 442	30	8	\$ 15	\$ 235		2	0%	7	5	
		Incoming Power										
		Pole & Transformer							20 kw peak			
2006	4	\$ -	40	1	\$ -	\$ -		2	0%	0	5	
		Connection										
2006	7	\$ -	35	1	\$ -	\$ -		2	0%	0	5	
		Control system										
		Incoming Telephone										
1985	8	\$ 85	25	7	\$ 3	\$ 71		2	0%	8	2	
1983	8	\$ 8,600	25	8	\$ 344	\$ 7,912		2	0%	9	2	
		Manual controls										
1978	8	\$ 425	25	7	\$ 17	\$ 476		2	50%	5	2	
		Land & Improvements										
		Land										
1950	10	\$ 630	300	1	\$ 2	\$ 118		4	0%	2	1	
1963	1	\$ 12,500	75	5	\$ 167	\$ 7,167		4	0%	6	1	
		Access Road										
2000	1	\$ 595	75	6	\$ 8	\$ 48		3	0%	1	1	
		Landscaping										
1963	1	\$ 1,360	75	7	\$ 18	\$ 780		2	0%	6	3	
		Security fence										
		Sub Structure										
		Cassion Outer										
1963	1	\$ 30,600	75	6	\$ 408	\$ 17,544		3	0%	6	4	
1963	1	\$ 4,250	75	6	\$ 57	\$ 2,437		3	0%	6	4	
		Upper Floor										
1963	1	\$ 6,800	75	6	\$ 91	\$ 3,899		3	0%	6	4	
		Dry well										
1963	9	\$ 4,250	60	7	\$ 71	\$ 3,046		2	0%	7	4	
		Landings and Stairs										
1963	1	\$ 5,100	75	6	\$ 68	\$ 2,924		3	0%	6	4	
		Wet Well										
1963	1	\$ 850	75	6	\$ 11	\$ 487		3	0%	6	3	
		Shaped floor										
1963	4	\$ 895	40	6	\$ 15	\$ 640		2	0%	10	4	
		Sump pump										
		Pumps										
		Drive shafts										
2006	6	\$ 12,560	35	1	\$ 359	\$ -		2	TBD	10	TBD	
		Pumps										
2006	4	\$ 29,750	40	1	\$ 744	\$ -		2	TBD	10	TBD	

Ready

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10:43 AM Tuesday 4/10/2007