MARSHALL STEVENS

Water & Wastewater Valuations

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EXPERTISE IN ACTION

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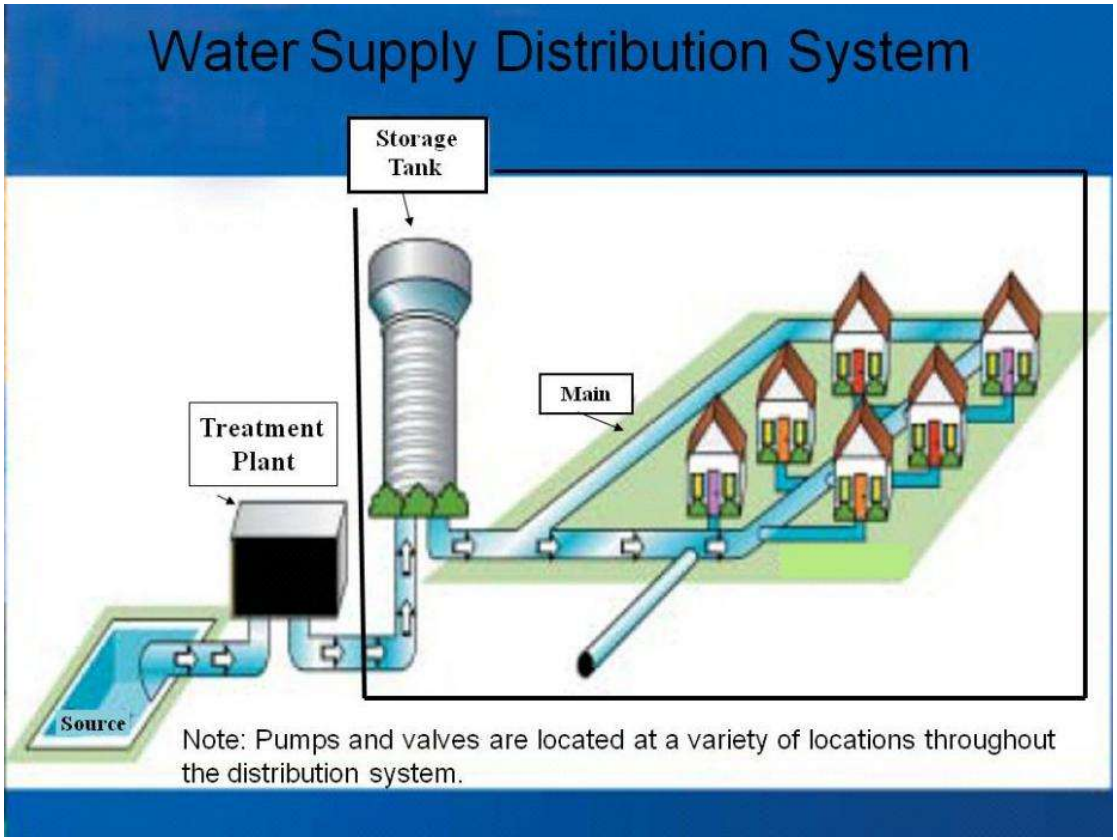
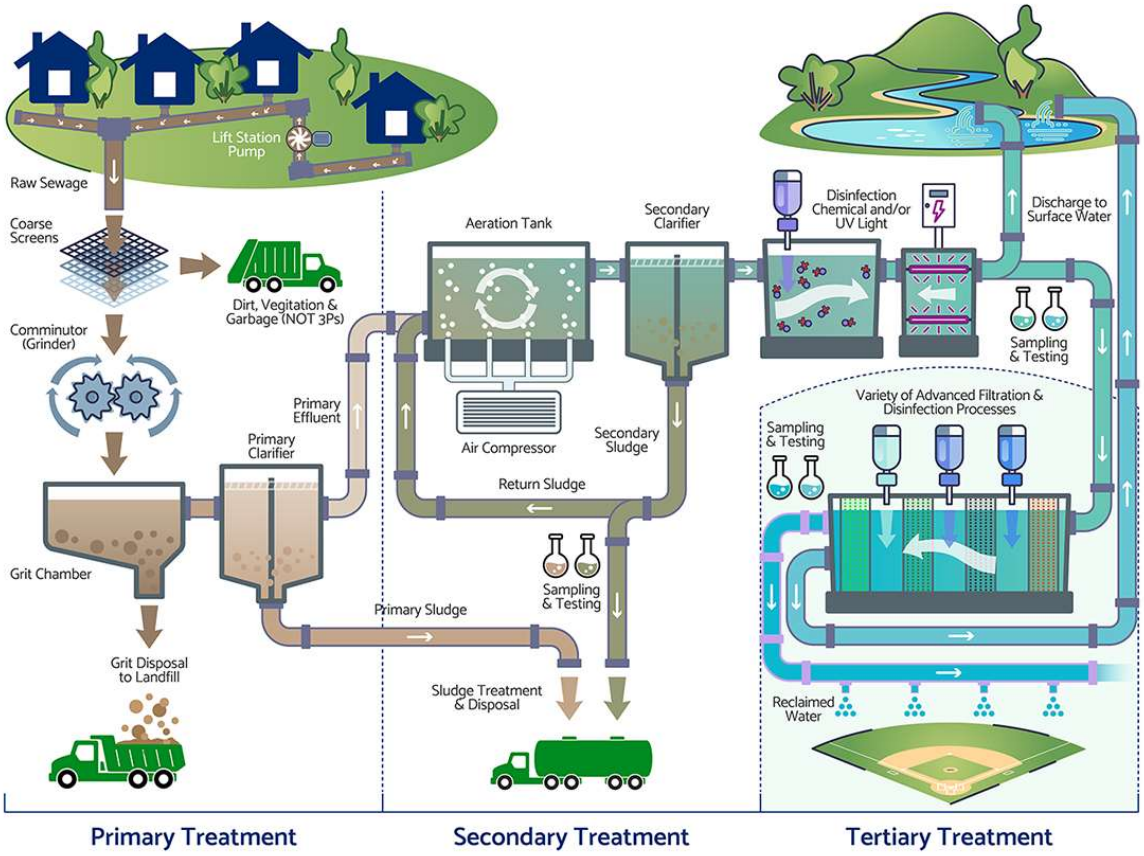
- Anthony Festa, ASA is a Managing Director at Marshall & Stevens, serving at the National Practice Leader for the Machinery & Equipment practice. He has over 28 years of experience in valuing machinery for financial reporting, tax, litigation, collateral financing and insurance purposes. He has been an ASA member for over 18 years, and has served as the New York City chapter president from 2010 to 2011.

What is a Water & Wastewater System?

Water Sourcing, Storage & Distribution



Sanitary Conveyance & Wastewater Treatment



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FMV (Defined)

- Fair Market Value: the price an asset or liability would change hands between a willing buyer/seller, both fully aware of the facts, with no compulsion to buy/sell, as of a specific date.

Why Are We Valuing the System?

- Purchase Price Allocation (post-deal)
- State Legislation (pre-deal)*
- Collateral Financing
- Insurance
- Tax (State & Local, Federal)

Impact of a FMV Study

- Rate case – imposed rate increases to pay for
  - Infrastructure costs
  - Regulatory compliance
  - Affordability

- Rates are NOT set by water companies, it's set by state utility commissions

- Net Book Value does NOT equal Fair Market Value

Key Water Statistics

- Over 52,000 + independent Investor-Owned Utilities
- Over 100,000 Municipal Owned Utilities
- Private water companies treat and distribute 2.8 billion gallons of water a day
- Environmental Protection Agency estimates over $1 trillion in upgrades will be needed over the next 20 years

Hot Topics in Water

- Aging Infrastructure
- Cyber Threats
- Sustainability (energy use, water reuse)
- PFAS / PFOA (or “forever chemicals”)

Value Approaches

- Cost Approach
  - Direct Method typically applied
- Income Approach
- Sales Comparable Approach

Cost Approach Reliance

- Why is the seller selling?
  - (Hint – no $$$)
- Buyer is buying the asset / system
- Not many comparables nor universal metric
- Income stream not reliable / measurable (quality of data)
  - Rate case considerations (rates will increase, not yet set by the state PUC)

Cost Approach Development

- Replacement Cost New
  - Direct Costing
    - Engineering Study
    - Marshall Valuation Services
    - RS Means
    - Other
  - Trending

Engineering Study Example

ASSET	MODEL/MANUFACTURER	CAPACITY	QTY.	CONDITION OPINION	REPLACEMENT UNIT COST	REPLACEMENT COST NEW	YEAR IN SERVI	AVERAGE SERVICE LIFE	PERCENT DEPRECIATED	REPLACEMENT COST LESS
10" PVC, AC Watermain (ft)			4,018		$110	$441,980	1983	80	53%	$209,941
12" PVC, AC Watermain (ft)			1,638		$135	$221,130	1983	85	49%	$111,866
2" PVC Watermain (ft)			325		$25	$8,125	2004	70	30%	$5,688
3" PVC Watermain (ft)			32,847		$35	$1,149,645	2004	70	30%	$804,752
4" PVC Watermain (ft)			30,386		$45	$1,367,370	2004	70	30%	$957,159
6" PVC Watermain (ft)			14,187		$65	$922,155	2004	70	30%	$645,509
8" PVC Watermain (ft)			3,614		$90	$325,260	2004	75	28%	$234,187
14" PVC Watermain (ft)			1,177		$155	$182,435	2004	85	25%	$137,363
4" PVC Watermain (ft)			1,500		$45	$67,500	2024	70	1%	$66,536
6" PVC Watermain (ft)			400		$65	$26,000	2024	70	1%	$25,629
Hydrants	Kennedy & Mueller		51		$6,000	$306,000	1994	70	44%	$170,486
Water meters and services			2,300		$2,500	$5,750,000	1994	40	78%	$1,293,750
Blow-offs			160		$1,000	$160,000	1997	60	47%	$85,333
Pump Building		1,000 sqft	1	B	$200,000	$200,000	1972	80	66%	$67,500
Chain link fence		650 ft	1	B	$20,000	$20,000	2000	30	83%	$3,333
Land Parcel 00H0-0000		Unknown	1		$10,000	$10,000	-	Perpetual		$10,000

Issues with Trending

- Fixed Asset Ledger Example:

Depreciation

- Age / Life Calculation
  - NARUC Lives
  - Normal Useful Lives
  - Remaining Lives (see Engineering Study)

- Condition
  - Observations
  - Testing

Condition

Condition

Functional Obsolescence

- Rated vs Actual Capacity
- Permitted Capacity?

Functional Obsolescence (cont.)

Wastewater (Gallons)	
25,000	Rated
15,000	Permitted
2,000	Actual
0.60	Scaling Factor
22%	Adjustment

Water Sourcing (Gallons)	
1,300,000	Rated / Permitted
350,000	Actual
0.60	Scaling Factor
46%	Adjustment

Sales Comparable Approach

The Sales Comparable Approach establishes value through analysis of recent sales of comparable property. An assessment is of the differences between the properties and the subject, and the sales prices are correspondingly adjusted to indicate the subject's value.

- Guideline Public Company Method
  - American States Water Company
  - American Water Works Company, Inc.
  - California Water Service Group
  - Essential Utilities, Inc.
  - Middlesex Water Company
  - H2O America
  - The York Water Company

- Comparable Transaction Method

Sales Comparable Approach (cont.)

- Difficulties with the Sales Comparable Approach include:
  - Limited Data Availability
    - Lack of audited financial statements proves difficult to conclude on a multiple of value.
  - Lack of Comparable Transactions
    - Differences in size, growth, and capital structure
    - Unknown deal terms
    - Unknown timing and market conditions

Income Approach

The Income Approach establishes the property's value based on the capitalization of the net earnings or cash flow. The income approach is typically used in the valuation of assets that produce, or are capable of producing, an identifiable stream of income or cost savings that can be uniquely quantified.

- Discounted Cash Flow Method
  - Considers a given company's future sales, net cash flow, and growth potential. Future cash flows are estimated for each year of a defined holding period and discounted back to present value.
  - Credible and Supportable Cash Flow Projections
    - Ideal to have at least 5 years' projections
      - Projections should be based on historical performance, known trends, and reasonable forecasts.
    - Supportable long-term growth expectations
  - Proper Discount or Capitalization Rate
    - Reflects the risk specific to the subject asset/business.
    - Weighted Average Cost of Capital is based on Guideline Public Companies.

Weighing of Values

- Final Value is determined by applying a weight to the results of each approach based on confidence behind the results

Final Deliverable

Table I - Value Conclusions

		Fair Market Value (Rounded)	Weight		Final Conclusion
Total - Cost Approach	$	10,841,200	60%	$	6,504,700
Total - Income Approach	$	2,153,000	40%	$	861,200
Total - Market Approach	$	-	0%	$	-
Final Value Conclusion				*$*	*7,365,900*

Final Deliverable (cont.)

Table I - Value Conclusions

	Fair Market Value (Rounded)	Weight	Final Conclusion
Total - Cost Approach	$2,154,000	90%	$1,938,600
Total - Income Approach	$620,000	5%	$31,000
Total - Market Approach	$680,000	5%	$34,000
Final Value Conclusion			*$2,003,600*

Valuation Challenges

- Identifying the assets to appraise (many older buried assets lack documentation)
- Application of sales comparable and income approaches
- Obsolescence (materiality)

Questions

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