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Deep Dive In Shallow Waters

May 5, 2016

Survey of 50+ U.S. municipalities suggests accelerating water capex/opex trends.

4200 bps increase in respondents seeing 5+% capex growth in 2016 vs. last year's survey.

Takeaways from Global Water Summit support capital deployment into reuse and desalination technology.

An in-depth look at scarcity issues facing California, including an interview with the director of the world's largest groundwater replenishment facility.

Top Picks: XYL and MWA continue to be our top ideas in the water space.

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AHEAD OF THE CURVE SERIES™

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Industry Update

May 5, 2016

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Deep Dive in Shallow Waters - Ahead of the Curve Series + Video

The Cowen Insight

The results of our U.S. muni water spending survey, takeaways from the Global Water Summit in Abu Dhabi, and our look at issues/opportunities facing the water scare in California - including our interview with the Director of the largest indirect reuse facility in the world - suggest an expanding funding environment for water-related investment. XYL and MWA remain our top picks in the sector.

Survey implies broadly accelerating capex trends and increased operational vigilance at large cities

Our survey provides hard data on U.S. municipal spending that is challenging to obtain considering there are over 50k water utilities nationwide. Our findings suggest an emerging, durable U.S. muni market - likely with a longer tail than most anticipate. Nearly 40% of survey participants expect 2016 capex budget expansion in excess of 5% - dramatically above the 6% response rate we found last year when we asked about 2016 capital budgets. Favorable trends are poised to continue into 2017 as 75% of respondents expect y/y expansion, with 40% seeing 5+% growth. When weighted by population (most spending is at large cities), the response rate for operating budget growth expectations for both 2016 and 2017 in excess of 5% increased by over 2x - big players are stepping up.

Conversations in Abu Dhabi suggest U.S. is behind developed world curve

We met with water leaders in Abu Dhabi at the Global Water Summit hosted by Global Water Intelligence and our general takeaway was that the U.S. is lagging other developed nations in terms of approach to water sustainability, investment, and public understanding of the issues. Reuse and desalination, two technologies now being deployed more domestically, are largely already in place abroad, sometimes even as emergency support systems. The international community, both the general population and the politicians, seem more willing and able to embrace the costs and changes that need to be implemented. Such measures will come to the U.S. out of necessity, providing a healthy investment outlook.

California - how the world's 7th largest economy is dealing with scarcity

California is implementing measures across the cost curve, from conservation, to reuse, to desalination to combat scarcity. We looked at the costs involved to deploy and operate each solution, interviewed the Director of Orange County's Groundwater Replenishment Facility - the world's largest - and looked at new technologies in development to lower overall cost to market. Indirect reuse is here now, and presents a meaningful forward opportunity for pump, treatment, membrane, engineering, and systems providers - the Orange County facility serves 850k people, cost over $600 MM to construct, and has a gross operating budget (ex debt service) of ~$30 MM.

Fittingly, Flint generates a spark

Underpinning an increasingly attractive spending dynamic in the municipal space is a national tragedy that has served to raise public awareness about the state of America's water infrastructure. We believe the main obstacle preventing larger scale improvement is political, as many such projects are publicly financed and tax increases are typically not what wins local elections. However, the events at Flint, MI could provide the political cover needed to pass funding measures geared towards preventing similar issues. Interestingly, survey respondents overwhelmingly indicated that Flint did NOT have a direct impact on their near term spending or priorities - a result we find to be deceptive at best based on our conversations with suppliers into those municipalities. Whether or not leaders are willing to publicly admit that there are areas that needed to be addressed, we fully believe Flint has, at worst, forced a hard look at existing infrastructure. At best, and consistent with the broader spending takeaways from our survey, the events have forced more proactive investment. The decisions that led to the crisis were aimed at saving ~$5 MM, and some estimates for total economic impact have been over $1 Bn encompassing direct costs, infrastructure improvements as a result, and health care costs for those impacted.

XYL and MWA are top picks to capitalize on expansionary trend - Increasing XYL price target from $44 to $48

In our inaugural survey last year (published 6/24/15) we highlighted XYL and MWA as our top picks in the water space, and since that time they have returned ~12% and 11%, respectively, vs. declines of 2% and 3% for the Industrials ETF and the S&P, respectively. We believe both, because of their leading market positions and the specific types of products they supply, are best suited to capitalize on expansionary budget trends identified by our survey. We have seen incremental evidence of not just market growth, but accelerating market growth, and should those trends remain in place it likely implies upside to our post 2017 estimates.

Please refer to Exhibit 1 on page 6 for a summary of XYL estimate revisions and relevant muni growth sensitivities for XYL and MWA. Model support for our updated DCF based price target can be found at the end of the report (Exhibits 27-29).

See our interview with Mehul Patel, Director of Water Production at Orange County's Groundwater Replenishment System.

Executive Summary

Please see our discussion on Flint, MI here

We continue to believe that the municipal water sector will see increased normalized spending at both the capital and operating levels as a result of rising state and local tax revenues, overly stressed large city infrastructure systems as urbanization trends continue, scarcity issues becoming more severe, and disasters such as Flint, MI sparking populist outcry and providing political cover to move projects forward. Positive trends we identified in our 2015 US municipal spending survey appear to be accelerating into 2016 – and we continue to see XYL and MWA as best positioned to capitalize. Over 75% of the 50+ US municipalities surveyed this year see capital budget expansion in 2016 and 2017 and over 80% see similar trends in operating budgets. We believe the results support recent momentum in the shares, and visibility provided into 2017 spending levels suggests sustainability in positive market trends. **We believe favorable trends in municipal markets are emerging, not peaking, and expect a multi-year investment horizon that is likely longer than the consensus view.**

Survey results were consistent with takeaways from our recent travels to Abu Dhabi to participate in the Global Water Summit, sponsored by Global Water Intelligence (GWI). The event brought together leaders from government, finance, and private industry, and the most actionable takeaways we found were **1)** reuse technology will be widely implemented as an initial tool to combat scarcity after conservation efforts are exhausted; **2)** desalination appears to be the likely endgame – technologies to improve efficiency and lower cost / environmental impact are in high demand; and **3)** there is an opportunity for private industry to step in and move "off the grid" in terms of water consumption – providing a stable source for their own needs and providing a public benefit. Each of these themes supports a higher level of normalized spending globally over an extended period. The most commonly discussed hurdle was political – tough to win re-election when you raise taxes to fund underground pipe rehabilitation absent a crisis in your specific jurisdiction, for example.

Click here for our discussion on California's water situation and here for our interview with Mehul Patel, Director of the GWRS

To gain a better understanding of the specific challenges facing states and municipalities – particularly those with scarcity issues, we focused on California. We investigated the methods available to combat scarcity, the costs involved, and the different technologies currently available and in development to implement these strategies. We also interviewed Mehul Patel, Director of Water Production at Orange County's Groundwater Replenishment System "GWRS" – the world's largest indirect potable reuse facility – to get his views on trends, technologies, and public willingness to move further away from traditional water sources. His comments highlight not only the need for more progressive views on our water balance, but also the success technologies already in play can have – the GWRS serves over 850k residents by treating a wastewater stream that previously would have been discharged into the ocean and effectively "lost". With only 19 such facilities in the US (all smaller in scale and mostly in California and Texas, according to WaterReuse.org), the potential for more widespread adoption and deployment looks very attractive.

For detail on relevant company exposures, click here

Broadly, our muni thesis has not changed since our last survey, but we believe events such as Flint make it easier for a clear need to develop into a financial reality. **Favorable trends impact several names in our coverage to varying extents, including CFX, FLS, GVA, IEX, PNR, ROP, and WTS – but we believe XYL and MWA are the most direct and appropriate ways to participate in what we see as a multi-year trend.**

(Survey conducted by Survey.com – click here for survey methodology)

Figure 1 Summary of XYL Estimate Changes and XYL / MWA Muni Growth Sensitivities

XYL Summary of Estimate Changes - PT from $44 to $48

	2016		2017	
	Previous	Current	Previous	Current
Revenue	$3,707	$3,783	$3,861	$3,941
EBITDA	$648	$666	$692	$721
EPS	$2.00	$2.08	$2.26	$2.37

Muni Assumptions and Sensitivities

	Muni Organic Growth Estimates			DCF Sensitivity to Long-Term Muni Estimate	
	2016	2017	2018-2020	+100 bps	-100 bps
MWA	8.0%	6.5%	5.5%	6.5%	-6.0%
XYL	7.2%	7.7%	6.6%	3.8%	-3.5%

Earnings Sensitivities to Muni Growth Estimate (keeping incremental margins constant)

XYL	2017	2018	2019	2020
Current	$2.37	$2.58	$2.83	$3.11
+100 bps	$2.39	$2.61	$2.89	$3.20
-100 bps	$2.35	$2.54	$2.77	$3.02

MWA	2017	2018	2019	2020
Current	$0.57	$0.63	$0.71	$0.78
+100 bps	$0.58	$0.65	$0.73	$0.82
-100 bps	$0.56	$0.62	$0.68	$0.74

Source: Company reports, Cowen and Company

Municipal capital spending expectations appear to be getting meaningfully better

Over 80% of surveyed municipalities expect 2016 water related capital spending increases, with nearly 50% seeing expansions in excess of 5% and 30% expecting 10+% growth. The magnitude is somewhat less pronounced when looking at 2017 vs. 2016 but still overwhelmingly positive, with 75% expecting another year of capital budget expansion, and nearly 40% seeing 5+% growth.

Figure 2 Over 80% of participants see capex expansion this year, with nearly 1/3 seeing 10+% growth

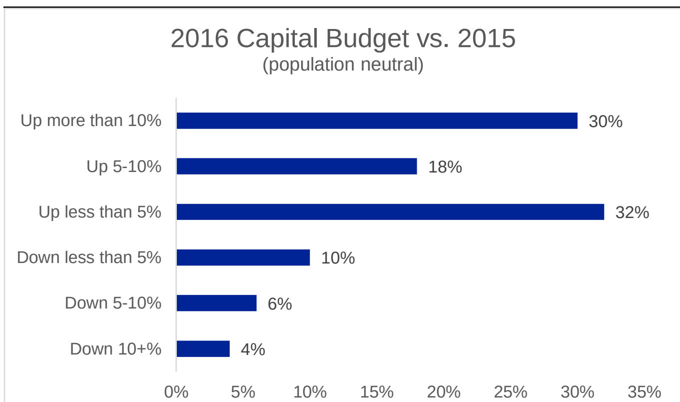
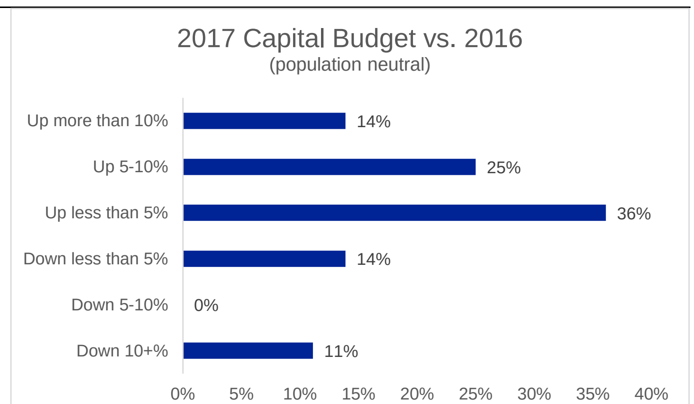


Figure 3 Similar trends expected in 2017



Source: Cowen and Company May 2016 Muni Spending Survey

When we ran our survey last year we asked respondents how they thought capital spending would trend over the next two years (meaning 2015 and 2016) vs. the average of the last two years. Only 6% of respondents in last year's survey saw forward 2 year growth in excess of 5% - far more conservative than what this year's response suggests for 2016 capital spending activity. Most were in the "about the same" camp, but it appears there has been a shift since that time and that funds are being released more freely. Capital spending growth tends to lag operating budgetary expansion, so the positive trend we are witnessing here suggests sustained momentum in the broader muni space.

Large cities (those larger than 500k residents) represent an outsized proportion of gross dollar spend nationally, and they were similarly positive. Roughly 70% see growth in 2016 and 2017 and ~36% and 20%, respectively, see 10+% growth. **Ten of the 11 large cities surveyed expect average capital budget expansion over the next two years.** When we weight our survey by population – which we believe gives the best true representation of domestic spending – the results clearly demonstrate increasing market strength.

Figure 4 Nearly 40% see 5+% growth on population weighted basis

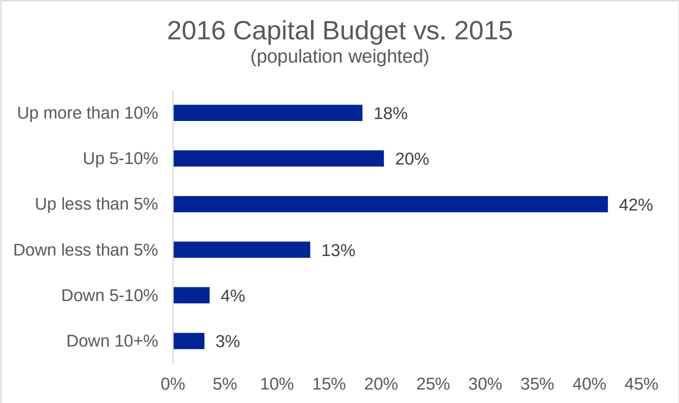
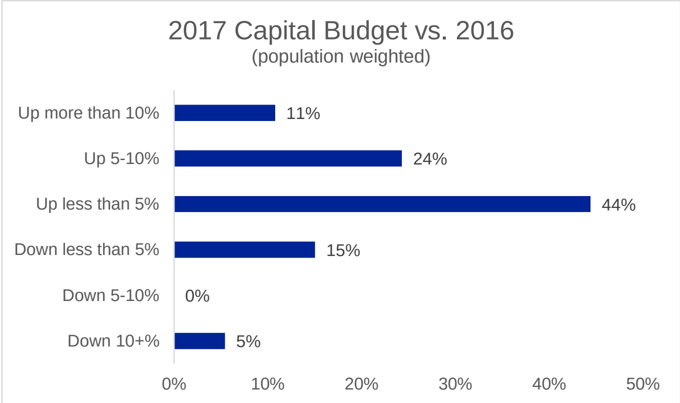


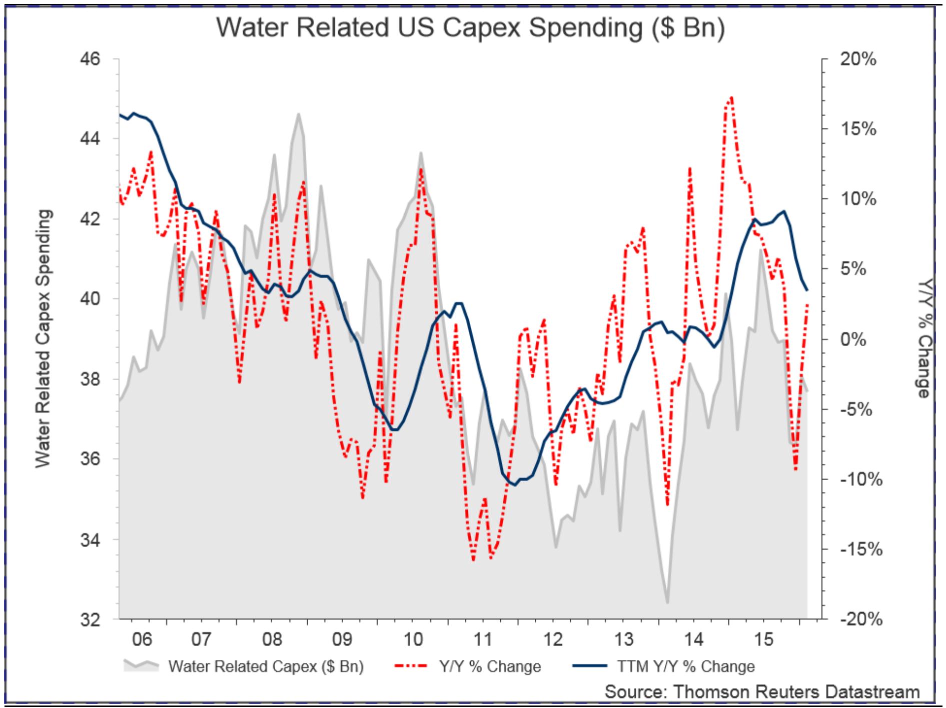
Figure 5 2017 similarly strong as large city capital budgets expand



Source: Cowen and Company May 2016 Muni Spending Survey

Census data on water capex shows a deceleration in capex spending levels to end 2015 before rebounding so far this year. Given the magnitude of the ramp from early 2014 lows to mid-2015 highs, a temporary moderation isn't particularly surprising. 4Q15 commentary from XYL suggested 20% growth in treatment orders (typically capex related), due in part to increased U.S. project activity, and treatment strength was again highlighted in 1Q16 results. Our survey suggests that the public data will continue to improve as the year progresses.

Figure 6 Water related capex decelerated after a strong move off lows – our survey suggests it was just a pause



Source: Thomson Reuters, Cowen and Company

Relevant commentary from the Global Water Summit in Abu Dhabi

Please click here for our in depth discussion on applicable measures to combat water scarcity, including an interview with the Director of Water Production at Orange County's Groundwater Replenishment Facility.

Reuse will be deployed where available after conservation and water import options at lesser costs are exhausted

At less than half (sometimes even 1/3) the cost of desalination, wastewater recycling has emerged as a viable solution. Given the source is treated wastewater, the standards for output are far more stringent and the result is pure water far cleaner than what is coming out of taps. Optics becomes the bigger challenge in using this purified water directly for drinking water purposes, and in the U.S. indirect potable reuse through mechanisms such as groundwater replenishment are utilized. Globally, direct water reuse, where the treated wastewater is put right into the potable water flow, is far less taboo. The consensus among conference delegates was that all nations with water issues will move in this direction out of necessity – however a full embrace of direct reuse in the U.S. is potentially a decade away.

Desal as an end-game or safety blanket – in search of tech to lower cost

Desalination remains as the most obvious way to deliver large scale volumes of additional potable water, but the cost component (particular energy consumption) typically makes it a last resort. This is an area ripe for technological innovation – better membranes, pumps, setups, etc. - please click here for our discussion. In places like Saudi Arabia, 90% of water going to consumers is desalinated – obviously this percentage is far lower in the U.S., but we are seeing more and more desal plants being built and planned in water scarce areas.

We met with representatives from Australia (SA WaterCorporation) and South Africa (Umgeni Water) who detailed their respective solutions to scarcity, which include desal plants constructed as a buffer – typically run at very low rates but ready to ramp up as drought conditions intensify. Spain has also deployed a similar strategy – representatives from Acciona Agua suggest that the fixed costs of these desal plants (used only when other sources are not available) represent ~40% of total operating costs, with energy at 40+% while the plant is running. They justify the costs by using a "what if" thought process – what if we ran into a period of intense scarcity without a desal option? What would be the true cost to the underlying economy in such a situation and how does that compare to the fixed cost of having these facilities sitting relatively idle in non-emergency situations?

Construction of plants for this purpose in the U.S. could prove politically challenging, as it would require large upfront funding for something that would be essentially a cost center in non-drought conditions. Though a solution like this could make sense over a longer-term horizon, it would likely be difficult to garner broad support unless extreme conditions were present at that time.

Reuse / Desal Project Outlook

Global Water Intelligence has identified 101 reuse and 77 desalination projects of varying stages of development and sizes in the U.S. Of note, all but one of the desalination plants and 8 of the reuse projects are in either the conceptual or very early stages. These projects tend to take a very long time to pass required regulatory milestones, but the extreme skew towards early stage does suggest a sizeable opportunity if projects ultimately move forward.

The pipeline is a bit more seasoned globally, but with only 18% of desalination and 14% of reuse projects past pre-RFP planning, the portfolio is still very young.

Figure 7 U.S. more focused on reuse, but project portfolio still extremely early stage

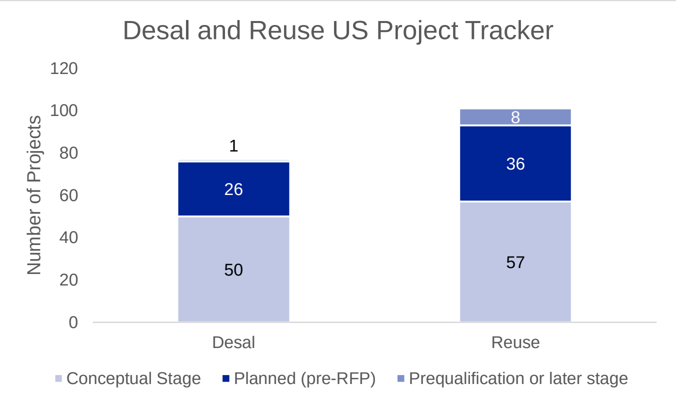
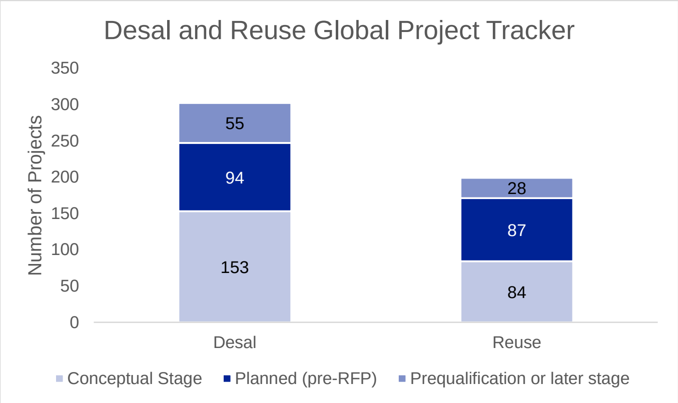


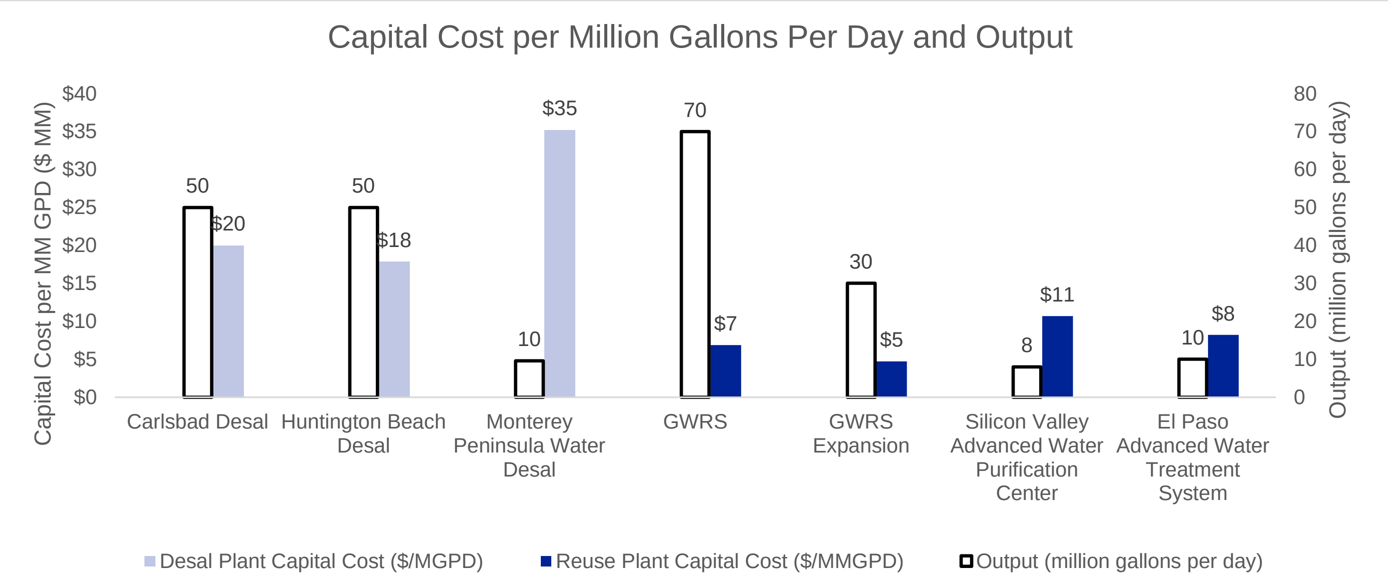
Figure 8 Global projects slightly further along timelines but still very early stage – more desal focused



Source: Global Water Intelligence, Cowen and Company

To get a sense of potential costs to develop these planned projects, we looked at a variety of domestic desalination and reuse projects of varying sizes. The two relationships that stand out are the inverse one between total output and per unit capital cost and how much more inexpensive reuse technology is relative to desal.

Figure 9 Clear cost advantages when constructing larger facilities – reuse structurally lower cost than desal



Source: Plant Reports and Websites, ValleyWater.org, Cowen and Company

Can private industry provide an "everybody wins" solution?

We found the discussion surrounding private industry's potential involvement to be particularly interesting. Representatives from Intel made a presentation about their Chandler, Arizona manufacturing site that includes a partnership with the local water utility. Semiconductor manufacturing is highly water intensive and requires ultra-pure input water. In an effort to secure its own supply and input quality, Intel helped finance and expand the local treatment facility that takes treated wastewater flows from the municipality, which otherwise would have been discharged, and treats it for use in its plant. Water is then treated again on exiting the plant, where it is either reused directly by Intel or recharged into the underground aquafer for later use. By using reuse technology, Intel effectively "saves" the local population the potable water that would otherwise be used for Intel's intake, and Intel's investment (the plant expansions were paid for by Intel and the plant is operated by the municipality) helps the local community as well. There seemed to be a general sense at the conference that companies moving "off the grid" in this manner is likely to be a continued trend.

Other private sector solutions discussed were partnerships where a third party constructs and owns the reuse/treatment plants, treats the water for free for the public, and sells water to industry at a "value price" rather than at cost – since the universally held view is that water is generally well underpriced relative to its need/importance on the industrial side. Both of these solutions represent ways private industry can help secure its own resources, and also help the public good by circumventing the political challenges surrounding purely publicly financed facilities.

XYL is best positioned on water capex expansion

See our new XYL model here – PT increased from $44 to $48

Figure 10 represents a matrix of relevant water exposures within our coverage organized by the type of solution implemented (please see our more detailed breakdown of each company's exposure here – we also highlight some private and smaller, uncovered companies that are poised to benefit).

XYL Multiple Valuation

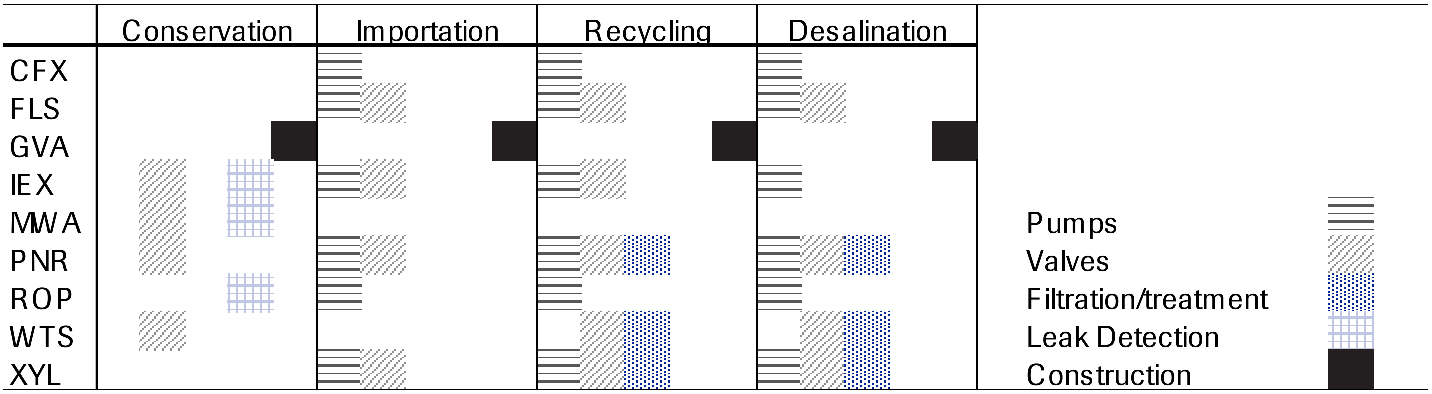
2016		**2017**	
Forward Adjusted EBITDA	$666	Forward Adjusted EBITDA	$721
Multiple	13.40x	Multiple	12.39x
Implied EV	**$8,927**	**Implied EV**	**$8,927**
Gross Debt	1,277	Gross Debt	1,277
Cash	742	Cash	742
Preferred	$0	Preferred	$0
Minority	$0	Minority	$0
Implied Equity Value	**$8,392**	**Implied Equity Value**	**$8,392**
Shares Outstanding	175	Shares Outstanding	175
Price Target	**$48.00**	**Price Target**	**$48.00**
EPS Estimate	**$2.08**	**EPS Estimate**	**$2.37**
Multiple	23.03x	Multiple	20.29x
Price Target	**$48.00**	**Price Target**	**$48.00**
Ex intangible			
intangible D&A	$44.00		$43.00
EPS Estimate	**$2.29**	**EPS Estimate**	**$2.56**
Multiple	20.95x	Multiple	18.72x
Price Target	**$48.00**	**Price Target**	**$48.00**

Source: Company reports, Cowen and Company

We see Xylem as the best way to capitalize on increasing water capex as it leverages the company's Transport (pump), Treatment (UV systems, etc.), and Test (analytics) offerings. Roughly 1/3 of total company sales are related to global municipal markets, but the company's exposure to other end-markets (Industrial at 45%, Resi/Comm at 20%) are water related and would likely benefit from increased water infrastructure spending. *We are modeling mid-single digit organic growth from US and European municipal markets through 2020, with double-digit growth in emerging markets.*

Municipal reuse would carry more leverage than desalination, as it would incorporate additional treatment opportunities to complement the pumps/analytics XYL could supply. Private industry investment in particular, and the trend of industrial companies moving towards their own treatment options, provides a nice opportunity. CEO Patrick Decker believes the company can ultimately move its business model towards the management of water as an asset for XYL's industrial customers. Everything from water intake into a manufacturing facility, to water movement throughout for production, HVAC, and machine cooling, to treatment/reuse on the back end – all for an ongoing fee. Such a development would increase recurring revenue and bring XYL closer to its customers as a partner in development.

Figure 10 Exposure to water scarcity solutions for some of our covered companies



Source: Company Reports, Cowen and Company

Operating budget trends similarly positive, particularly at large cities

Consistent gains in state and local tax receipts have helped municipalities replenish operating budgets and commentary in the sector regarding improvement in break and fix markets has been consistent for some time now. *Our survey results are, as anticipated, consistent with that view with over 80% of respondents expecting operating budget expansion in 2016 and 2017.*

Figure 11 Over 80% of respondents see opex growth in 2016…

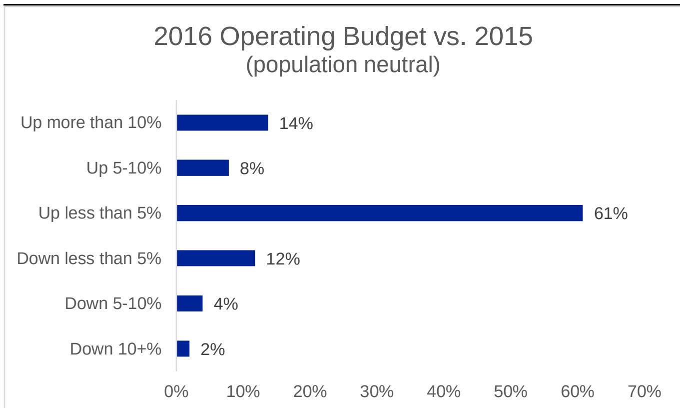
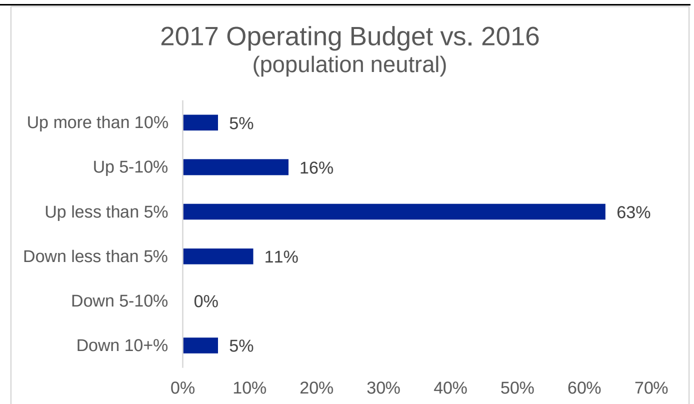


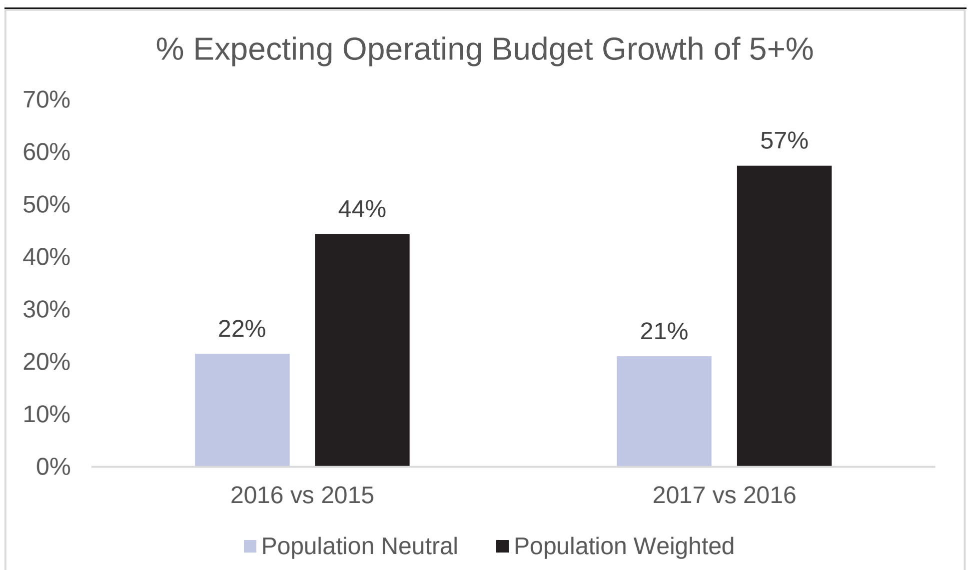
Figure 12 …and again in 2017



Source: Cowen and Company May 2016 Muni Spending Survey

However, results appear more striking when population weighted, as large cities (with increasingly stressed infrastructure due to urbanization trends) appear poised for larger budgetary expansions. **On a population weighted basis, the response rate for those expecting annual operating budget expansion in excess of 5% was more than double the population neutral result.** This is certainly a positive for suppliers into the sector, as these large networks receive increasing attention.

Figure 13 Response rate for 5+% growth doubles on a population weighted basis



Source: Cowen and Company May 2016 Muni Spending Survey

Consistent growth in state and local tax receipts suggests support for broader municipal budgets, and as water related costs (as measured by the CPI for water and sewer maintenance) continue to outpace general cost inflation, we would expect water directed spending to remain firm.

Figure 14 Consistent tax receipt growth should broadly support municipal budgets

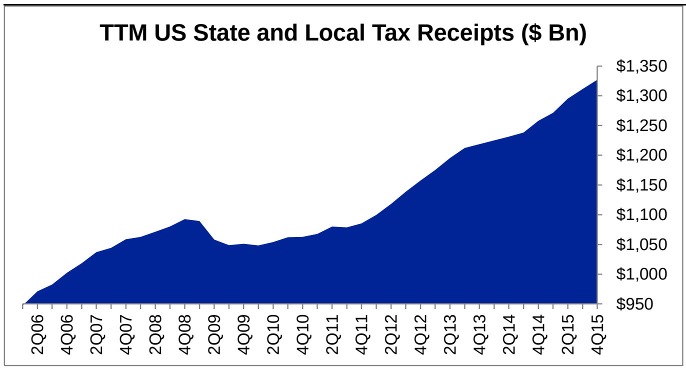
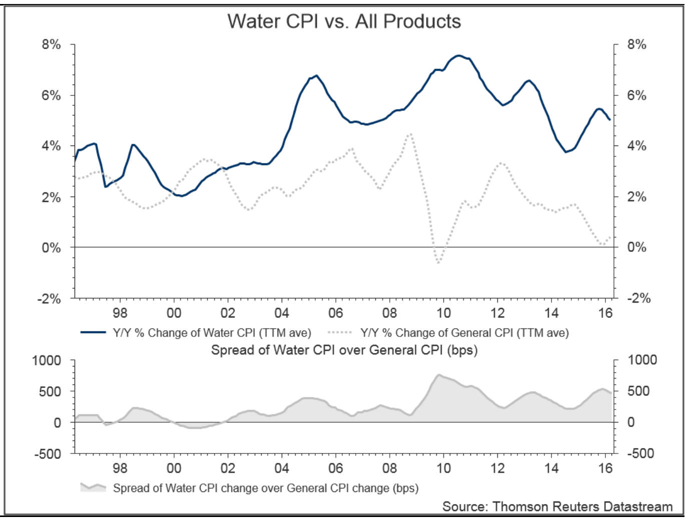


Figure 15 Water costs are increasing faster than general inflation – supportive of increased spending



Source: U.S. Census Bureau, Thomson Reuters, Cowen and Company

Relevant commentary from the Global Water Summit in Abu Dhabi

The primary topic consistently brought up related to operating budgets was non-revenue water – the amount of water flowing through pipes and distribution networks that is lost through leaks, etc. In emerging economies this can represent over 50% of water in the system. In the U.S., the national average is estimated to be around 20%, with some utilities much lower, and some much higher. At the conference's closing panel, the Saudi water minister said that non-revenue water is about 20% in Saudi Arabia, costing the country ~5 billion Riyal (~$1.3 Bn) per year. Considering that over 90% of water going to consumers in Saudi Arabia is desalinated at a high cost, to simply lose it through an inefficient network is difficult to accept. An EVP at Veolia called the abundance of non-revenue water a global failure to date. What's particularly frustrating in this regard is that this is not an area that needs technological innovation – it's a matter of rehabilitating/replacing old and damaged pipes, and installing better metering and monitoring/leak detection systems to identify problems as they happen.

MWA is best positioned to capitalize on expanding operating budgets – metering/leak detection business interesting if they can gain scale

Revenues tied to municipal operating budgets represent nearly 50% of MWA's total sales – largely related to core valve, hydrant, and brass products that go into municipal transmission and distribution lines. With leading market share positions in core products, few players, and largely captive customers, MWA enjoys better pricing power than most industrial companies. *We are modeling ~6.5% average annual topline growth from US municipal repair/replacement revenues through 2020, with roughly half of that growth coming from price alone.* In that sense, our estimates could prove conservative should underlying markets show sustained growth from a volume perspective. As increased focus is placed on existing infrastructure – crises such as Flint, MI have helped to raise public awareness – it should benefit Mueller's core business that is focused on efficient flow through the network.

The company's Mueller Technology segment houses its advanced metering and leak detection businesses – which represent ~7-8% of current revenue and currently operate at a slight loss. We have been a bit critical of these businesses of late, not because of the technology they possess, which looks good, but because we question the ability to scale the business. We note, however, that ~8% of survey respondents did mention that they were in the process of upgrading their metering systems to an Advanced Metering Infrastructure "AMI" system – a technology that MWA is focused on. Nearly 40% of respondents currently maintained dated visual read systems on at least part of their network – representing a potential opportunity should they look to upgrade.

On the leak detection side, MWA's Echologics business is focused on fixed, real time, continuous leak detection. Feedback on the business has been positive, but we note that it still represents less than 2% of total company sales. *Our estimates on the Mueller Technologies segment have broadly been below management's guidance, but should they prove they can gain adequate scale (they did sound positive last quarter), it would represent upside to our numbers, which assumes breakeven for the segment in 2018.*

The failure of Flint and the genesis of a public outcry

See a timeline of key events in the Flint crisis here

What started as a financially motivated decision to switch the city's water source (anticipated savings of ~$5 MM) has most recently resulted in felony and misdemeanor charges against three state and city employees and has become a flashpoint for political failure and the poor state of much of the country's underground infrastructure. Fallout from Flint could end up having over $1 Bn of economic impact when accounting for direct costs, new infrastructure as a result, and health care costs for those affected – over 200x the initial savings estimate.

It is our sense from talking to industry participants that the overwhelming obstacle to making material investment in water infrastructure is political. With few exceptions, most Americans can turn on their faucets and clean water comes out. Convincing that same person that a tax hike is needed to finance a multimillion dollar rehabilitation project to the city's water infrastructure is a steep hill to climb when that person doesn't actually "see" the issue. For local politicians that have to run for re-election every few years, outside of a crisis environment, it's a situation that is easy to simply leave alone.

We believe the fallout from Flint can help to provide the political cover to make preventative investment to stop future problems – a development that would have far greater impact than any direct rehabilitation costs needed in Flint specifically.

Though Flint is the highest profile issue we have seen, it certainly isn't an isolated occurrence. *An analysis of the EPA's Safe Drinking Water Information System (SDWIS) database by USA today revealed that since 2012, approximately 2000 water systems across the U.S. had elevated lead levels in tap water samples*. As more independent research is conducted, the population will be empowered to question local and state officials about the status of their water network and the corresponding pressure could embolden politicians to act.

The use of lead in pipes has been banned since 1974 (via the Safe Drinking Water Act), but according to the EPA, there are still currently an estimated 10 million lead service lines that connect water to homes and buildings. A study by Fitch Ratings estimates that there are 6 million lead service lines across the country and changing them would cost over $275 billion. The EPA believes that $385 Bn needs to be spent by 2030 to improve water infrastructure.

Interestingly, only one out of 51 cities in our survey has indicated that its near-term focus has been directly altered by the Flint water crisis – Pasadena, TX. The town of ~150,000 south-east of Houston mentioned that its current and future fiscal year capital budgets will increase by at least 10%. The vast majority of the respondents suggested that the Flint crisis has had no direct impact on their spending priorities and that they have been proactively testing the level of lead/corrosion on an ongoing basis. We find it difficult to believe those in charge made no changes as a result of the Flint situation, and our discussions with suppliers into those municipalities suggest that the responses are, at best, deceptive in this regard. We understand that those representing the municipalities may not want to give the impression that they are being reactive, but to assume they aren't seems unlikely to us considering the potential costs of inaction.

California as a microcosm for water scarcity – a look at the solutions and costs involved

According to Global Water Intelligence and the World Bank, 70% of fresh water is used for agriculture, 13% for industrial consumption, and 12% for domestic use. The main source for water is proximate surface water, which is under constant pressure of being depleted due to water stress, water shortage, and water crisis. Water stress is the difficulty of obtaining fresh water during times of need and may result in further depletion and deterioration of available resources. Water shortage is similar and is due to prolonged droughts or overuse of water. Water crisis can occur when otherwise potable water is not available due to contamination. Water scarcity can arise from one or a combination of these phenomenon.

Figure 16 Drought Monitor as of today…

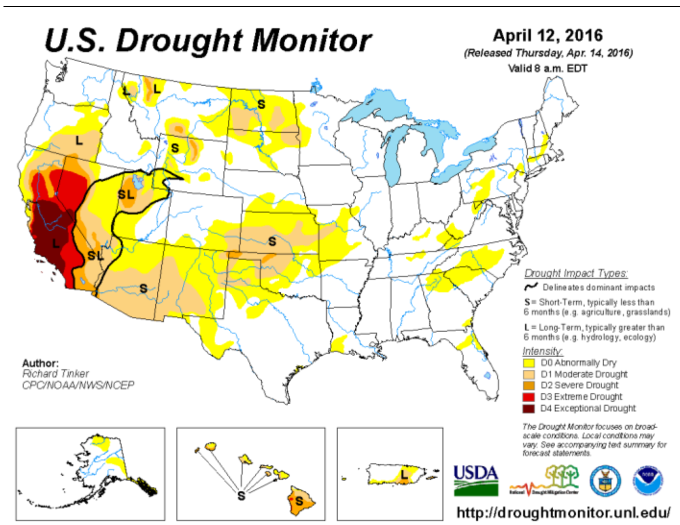
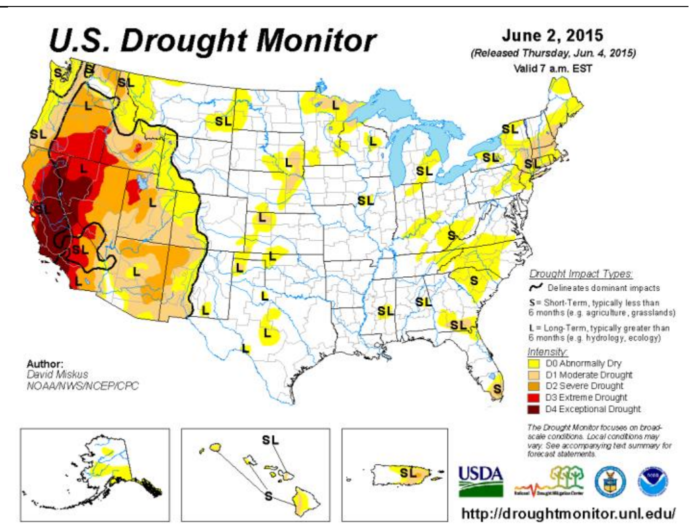


Figure 17 … and last summer



Source: US Drought Monitor, Weather.gov, Cowen and Company

A steep cost curve as we move away from traditional water sources

	Liter	Gallon	Cubic Foot	Cubic Meter	Acre-foot
Liter	1	3.79	28.32	1,000	1,233,481
Gallon		1	7.48	264	325,851
Cubic Foot			1	35	43,560
Cubic Meter				1	1,233
Acre-foot					1

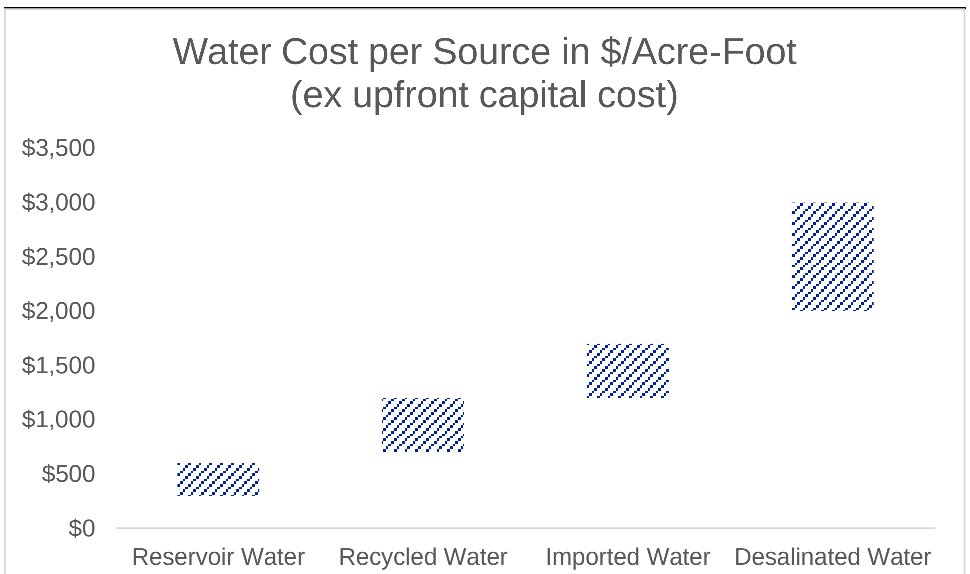
Source: Cowen and Company

The cost of water is obviously highly dependent on its source. Costs increase as water is transported over greater distances and/or sourced from non-natural sources. In many cases, municipalities rely on a combination of natural and artificial sources to address long-term needs.

Depending on the availability of fresh water sources (lakes, rivers, underground aquifers, etc.), a municipality will vary its requirement for other sources such as importation, recycling, and desalination. Logic would hold that the easiest and most direct way to combat scarcity is to simply consume less – and consistently, all survey respondents who identified measures currently in place to deal with scarcity (~26%) mentioned conservation as the first step.

Figure 18 illustrates the price of water per acre-foot for each of the different sources of water. An acre-foot equals approximately 326,000 gallons of water and is the average consumption of a suburban family for a year. This represents about 900 gallons of water per day. In California, reservoir water costs between $300 and $600 per acre-foot. The same quantity of water costs approximately $700-$1,200 when it is recycled and between $1,200 and $1,700 when it is imported (wide variance depending on location in the U.S. and globally). Finally, desalinated water remains one of the most expensive methods of procurement and costs between $2,000 and $3,000 per acre foot. In comparison, an acre-foot of bottled water costs $300,000 - $500,000.

Figure 18 The price of an acre-foot of water varies greatly depending on its source



Source: Several Municipalities in California, Cowen and Company

The solutions to water scarcity

Below, we present a few solutions to fight against water scarcity from the most cost effective and easiest to implement to the most expensive/challenging and continue to use California as our proxy.

Conservation - Using less water is cheaper than developing new supplies

Water conservation policies and strategies are the easiest and most cost effective ways to protect and manage the use of fresh water. Many municipalities and states advocate for more efficient household water use - turning off water while shaving or brushing teeth, taking shorter showers, etc. However, the real savings can come from optimization of crop irrigation by controlling the amount and timing of water to limit loss and evaporation. Due to the exceptional level of drought in California, the state has implemented unprecedented water conservation rules that limit the use of water for lawns and landscape irrigation while calling for personal water use reductions of 20%. In some parts of the country, water prices have been adjusted to incentivize water conservation either through a flat rate increase or through a tiered pricing structure where heavy users pay increasingly more than efficient ones.

Leaking pipes: Depending on the source (EPA, American Society of Civil Engineers, Center for Neighborhood Technology, American Water Works Association), leaking pipes lose between 2 and 2.5 trillion gallons of water each year in the U.S., or roughly 14% of public supply. The problem is largely coming from an aging pipe infrastructure that can be as old as 100 years in some cities. Replacing old pipes is a lengthy process (2000 feet can take 2 months in Los Angeles) and expensive (the Department of Water in L.A. has a $1.3 billion plan to replace 435 miles of pipe in the next 10 years). Advanced metering and fixed leak detection solutions (like MWA's AMI and Echologics) can help municipalities identify and fix these problems.

Rainwater harvesting is another means of conservation and is regulated differently by each state. While some states are heavily regulated, some others will give tax credits for the installation of a cistern to collect rainwater.

Conflicting views on water conservation

Despite all the efforts undertaken in California to reduce consumption, many urban suppliers say the regulations don't provide enough relief. First, water conservation is often on a voluntary basis, relying on the population's self-control to consume less water and to take ownership of the issues. Second, water conservation is usually focused solely on urban water use, and even if the entire population suddenly stopped using municipal water, it generally wouldn't be enough to prevent water scarcity. For example, in California, urban water use represents only 10% of total human water consumption. Conservation is an obvious initial step, but typically inadequate on its own in true scarcity situations.

Importation

When communities consume their water faster than it can be replenished, one of the options is to import additional water from other areas. In California, the water cycle is not enough to provide water to state residents and farmland. The Colorado River supplies water to irrigate crops and is also a vital source of water for urban southern California. However, the state cannot draw as much water as it wants/needs and is entitled to 4.4 million acre-feet of water annually from the river.

Figure 19 Water Importation for Southern California

Source: HuntingtonBeachCA.gov, Cowen and Company

The State Water Project (SWP) collects water from Northern California and distributes it to water-scarce regions of the state. It is operated by the California Department of Water Resources and provides water to 25 million Californians and 750,000 acres of farmland (30/70% distribution respectively). It is made up of 701 miles of canals and pipelines, 34 storage facilities, reservoirs and lakes, 20 pumping plants and 5 hydroelectric power plants.

Importation issues

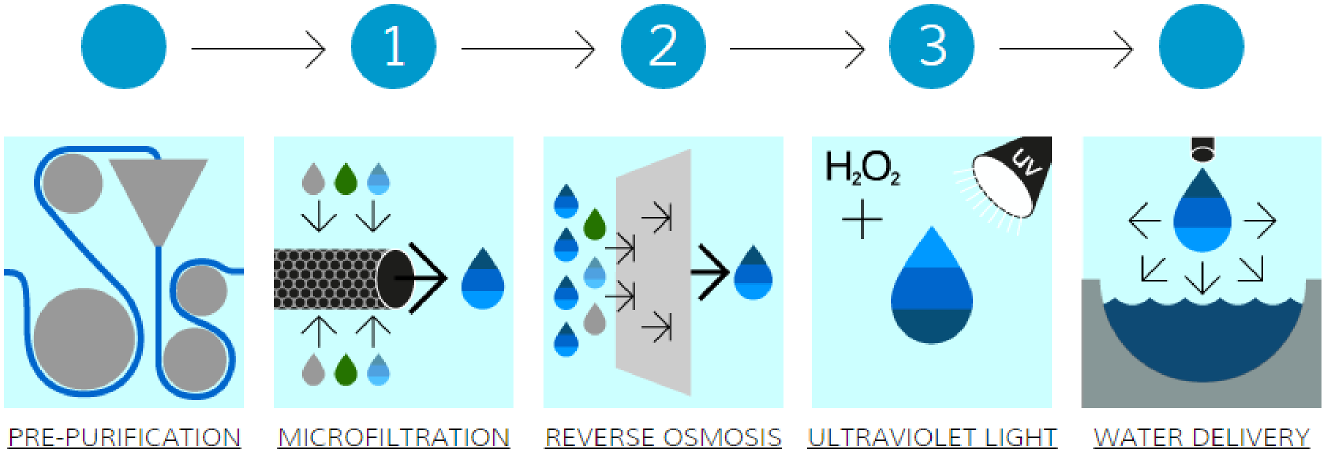
While importation adds new water to a network, it does not create "new" water from a universal point of view, it merely re-distributes it. Taking water from someone who doesn't need it (yet) is not a long-term solution, and other sci-fi ideas such as moving water from Alaska or towing an insulated-wrapped iceberg from the Artic (all actual ideas that have been put forward) are just not realistic.

Water recycling – from waste to taste

While the two previous solutions to water scarcity reallocate or preserve water, the next two solutions that we highlight increase the amount of water to the supply network.

Water recycling, or water reclamation, takes wastewater from municipalities, removes sediments and other impurities for either direct or (more likely in the U.S.) indirect potable reuse. The world's largest advanced water purification system is the Groundwater Replenishment System (GWRS) that is a joint project of the Orange County Water District (OCWD) and the Orange County Sanitation District (OCSD). This particular system takes treated wastewater that would otherwise be returned to the Pacific Ocean and purifies it in a three-step program:

Figure 20 The process of the water purification in the GWRS



Source: OCWD, Cowen and Company

Pre-purification

The wastewater is first treated at the OCSD where it goes through stringent control and quality standards before it is sent to the GWRS. The wastewater goes through bar screens, grit chambers, trickling filters, activated sludge, clarifiers and disinfection processes.

Microfiltration

The first step at the GWRS is the separation process called microfiltration. Through this process, microorganisms, bacteria, some viruses and suspended particles are separated from the water.

Reverse Osmosis (RO)

During the second step of the process, water is forced through a semi-permeable membrane under high pressure that removes dissolved chemicals, viruses and pharmaceuticals in the water. This results in water that is near-distilled quality and minerals must be added back to stabilize it.

Ultraviolet Light (UV)

Through the third and last step of the recycling process, water is exposed to high-intensity UV in conjunction with hydrogen peroxide (H_2O_2) to get rid of any trace of organic compounds that may have gone through the RO membranes.

Water Delivery

After having gone through the three-step process, water can be directly blended with reservoir water to supply households, discharged back into lakes and rivers, or used to replenish groundwater as it is done at the GWRS.

People getting used to the idea of treated wastewater – evolution to direct potable reuse potentially a decade away in the U.S.

Public misperception is the number one initial barrier to adopt wastewater recycling as a primary solution to bring water from "toilet to tap". The American Psychological Association has a term for this, it is called the magical law of contagion, which basically says that once water has come in contact with something disgusting, it is always in contact in people's minds. This is likely more a question of timing as people will get used to the idea – just like 5 million Singapore residents already have. Treated wastewater, because of its source, is treated by law to beyond drinking water standards. In our interview with Mr. Mehul Patel, PE, Director of Water Production at GWRS, he explained that the people's reluctance to recycled water in California shifted once the population was exposed to severe drought conditions that led to water scarcity.

Today, indirect reuse – where treated wastewater is reinjected into the water cycle for eventual use as potable water – is accepted. Moving towards direct potable reuse – where the environmental buffer is removed – will take time as regulators determine how to implement the technology safely and ensure all operators are in strict compliance with treatment standards. It will likely happen, but Mr. Patel believes it could take 10 years before such facilities are in operation in California.

Desalination

When most of the other options have been exhausted, desalination is often introduced as a complementary process to add potable water to the network. The most common technology used in the U.S. is reverse osmosis (identical to the last step in water recycling). Hydraulic pressure is used to force seawater or brackish water through a membrane that separates the salt from water molecules. Reverse osmosis also removes other molecules, viruses and bacteria. Out of the 15,000 existing desalination plants globally in 2012, 60% of the desalinated water was coming from reverse osmosis and the rest was made up of different technologies discussed in Appendix 2 – see here.

In the U.S., the $1 billion Carlsbad Desalination Project was opened in late 2015 and is able to produce 50 million gallons of potable water daily, or 7% of the San Diego region water needs. The plant is operated by Poseidon Water, who is planning on building a similar desalination facility in Huntington Beach, CA that is scheduled to be operational by 2019.

Desalination taken with a grain of salt

There are two prominent issues with desalination: 1) The cost – both in terms of capital and operating costs. Carlsbad cost twice as much to construct as the GWRS and produces 30% less volume per day. Operating costs for desal can be 2-3x recycled water due to the large energy requirement. 2) The environment impact. The brine water reject has a very high level of salinity which affects not only seawater life, but also contributes to coastal erosion. For these reasons, new technologies to lower the cost of desalination are in high demand. More efficient pumps, membranes with higher efficiency levels at lower pressures, innovate RO setups, and forward osmosis pretreatment are among technologies currently being investigated.

Appendix 1 – Relevant Exposures by Company (listed alphabetically)

Colfax (CFX Outperform $33 PT)

Colfax is mostly exposed on the wastewater treatment side with its wide array of pumps. The company provides solutions for every state of wastewater treatment and can handle a range of different viscosities, pressures, flows and composition.

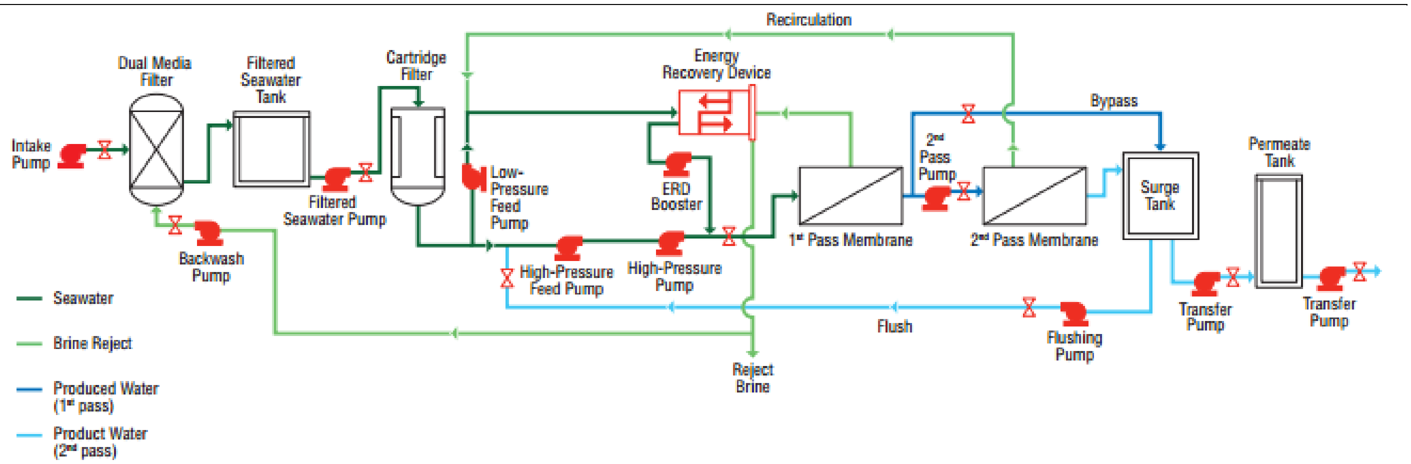
We estimate wastewater treatment to make up less than 5% of total revenue and likely closer to low single-digit. Wastewater products and solutions are part of the General Industrial sector of the Gas and Fluid Handling segment which represents less than 15% of sales. Thought they do have some exposure here, it not particularly material to total company results.

Flowserve (FLS Market Perform $41 PT)

Flowserve provides complete, integrated flow control solutions to seawater reverse osmosis (SWRO) plants globally. Some of its specific applications include source water intake, high-pressure membrane feed, high-pressure booster, filter feed, chemical dosing and bine transfer on the pump side, as well as energy recovery devices and high pressure and automated valves.

Flowserve's total water revenue is approximately 5% of sales and is present in each of its three divisions (EPD, IPD, & FCD). However, most of the water exposure resides in the IPD segment, at nearly 15% of segment sales.

Figure 21 Illustration of Flowserve's opportunity within a seawater reverse osmosis (SWRO) process



Source: Company presentations, Cowen and Company

Granite Construction (GVA Outperform $55 PT)

Granite is involved in the construction and engineering of water infrastructure-related projects, from dams and flood control structures, to reservoirs, wastewater treatment plants and lined canals for agricultural irrigation. Though the sector is not a primary market for them, they have identified water distribution as a target for additional M&A.

IDEX Corporation (IEX Market Perform $68 PT)

IDEX has a variety of businesses that provide products and services to water and wastewater treatment plants as well as muni infrastructure and desal plants. These offerings include pumps, meters, flow monitoring hardware and software, leak detection, and infrastructure inspection systems. These products are within the company's Fluid & Metering Technologies segment and represent ~6% of total sales.

The company also manufactures rescue tools and fire suppression products (10+% of sales globally) that are sold into municipal markets, though predominantly outside the US. Though these types of products are outside the scope of this report, they would benefit from increasing municipal budgets.

Mueller Water Products (MWA Outperform $12.50 PT)

A top pick in the water space. Through its Mueller Co. and Mueller Technologies products, MWA provides valves, hydrants, water meters, and leak detection and pipe condition assessment technology and services.

Over 70% of Mueller Co., its core business with sales of $700 MM in 2015, is driven by repair and replacement of municipal water distribution and treatment systems, with the remainder largely tied to new water infrastructure related to residential construction. 100% of Mueller Technologies (~$90 MM in 2015) is exposed to municipal spending in the form of metering systems, leak detection and pipe condition assessment products and services.

Pentair (PNR Market Perform $55 PT)

Pentair provides pumps and a wide range of filtration applications such as membranes, pre-treatment systems, ultrafiltration and nanofiltration applications as well as high-performance seals.

Some of the water exposure for PNR is on the consumer side (filtration, softeners, and pool products and solutions for its residential businesses) as well as small, portable reverse osmosis systems. It is therefore sometimes hard to dissociate these products from muni and industrial exposure. Subtracting 20% from Water Quality Systems for Food & beverage businesses, and an additional approx. $700 MM for pool products and services yields about $400 MM exposure to residential and commercial for the segment. There is also some water exposure (includes muni) in the Infrastructure sector of the Flow & Filtration Solutions segment, and we estimate this to represent about ~$200 MM.

Roper Technologies (ROP Outperform $210 PT)

Through its Neptune business, Roper delivers a large array of smart water meters as well as mobile data collection and leak detection systems. The company also has municipal exposure on the pump side through its Cornell business.

We estimate Neptune to represent approximately 8% of total sales (or $280 MM in 2015) and the municipal component of Cornell to be less than 1% of total company sales.

Watts Water Technologies (WTS Market Perform $55 PT)

Watts' water solutions include water regulating devices and control valves as well as water filtration, reverse osmosis systems, UV disinfection systems and even integrated rainwater harvesting systems for businesses, industrial facilities and agricultural applications.

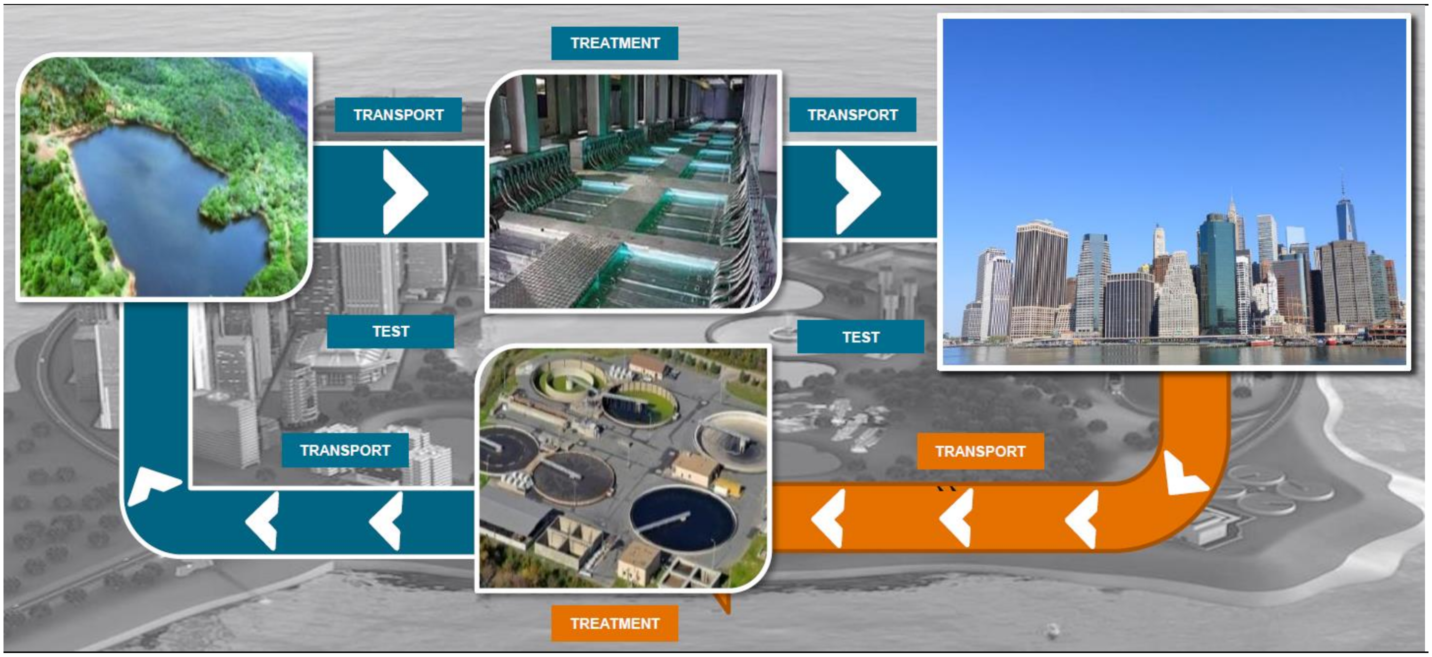
100% of the company's products and services are correlated to the water sector (depending on how you consider commercial boilers), though very little comes from municipal spending as the majority of its sales are exposed to residential and commercial applications. We see WTS potentially benefiting the most from water conservation efforts (vs. other solutions to water scarcity) due to its large array of consumer-driven products.

Xylem (XYL Outperform $48 PT)

We favor Xylem in the water space as we believe the company has the right mix of exposure amongst public utility, industrial and commercial applications along with a global diversification of its sales. On the water treatment side (~$320 MM in revenue in 2015), XYL is present at each step of the process and provides pump, dual-stage membrane bioreactor systems, a full line of filtration and membrane systems, sludge collectors, UV and ozone disinfection systems and analyzers and controllers to monitor water quality.

More than a third of the company's revenue is directly tied to public utility spending, both on the clean water and wastewater side. The company is ideally exposed to capitalize on shifting infrastructure burden from public to private/industrial customers. Increased and new regulations also benefit XYL with commercial and residential applications. In addition, dewatering is a $640 MM business that provides other opportunities to cater to public utility and industrial clients.

Figure 22 Xylem is exposed to the entire water cycle – dirty water and clean water



Source: Company Reports, Cowen and Company

Other highlighted companies we met with in Abu Dhabi

Evoqua (private)

The former Siemens water business is a large global player with meaningful exposure across the municipal spectrum (30% of sales – filtration systems and membranes, treatment, clarifiers, etc.) and industrial process water sector. It believes it is well positioned to capitalize on surge in municipal capex spending and increasing treatment demands from industrial customers.

Rotoplas (AGUA-MX, not covered)

Manufactures storage and treatment solutions, largely in Mexico/Latin America, that provide reliable potable water in areas where local municipal systems are either inadequate or absent. Offers commercial, residential, and municipal solutions and is expanding operations into the U.S. The company's solutions provide a water buffer between supplied water and consumed water.

Desalitech (private) – winner of GWI's "Breakthrough Water Technology Company of the Year" Award

Provider of unique reverse osmosis systems that serve to maximize recovery levels while limiting required pressure and brine. Applicable for municipal and industrial uses.

H2O Innovation (HEO-V, not covered) – winner of GWI's "Water Technology Company of the Year" Award

The company manufactures membrane filtration systems and designs innovative, custom systems and solutions that allow (among other things) increased flexibility in decision making since it frees the end-user from a single membrane producer. Applications in municipal wastewater, desalination, etc. Also provides aeration solutions.

Appendix 2 – Methods of water desalination

Thermal processes are usually used to treat seawater where large amounts of water are required and waste heat is readily available or energy costs are low. Membrane processes are used to treat brackish water and seawater where flow rates are low. The most utilized technology, reverse osmosis, is relatively simple to operate, and costs are highly dependent on the size of the plant.

Thermal processes

Multi-Stage Flash distillation (MSF)

MSF accelerates the natural process of thermal desalination as salt water is heated by steam, condensates, and potable water is collected. The plants work in stages with a cold end and a hot end, with each stages having a different pressure corresponding to the boiling point of the salt-water mix at that particular point in the process. Each stage has a heat exchanger and a condensate collector. MSF plants are often paired with power plants to collect dissipating heat and provide a cooling system for the power plants, which contributes to lower the total cost. MSF distillation requires less seawater pretreatment than RO and is usually more economic as well.

Multiple-Effect Distillation (MED/ME)

Similarly to MSF, MED works in different stages (or effects). Seawater is sprayed on steam heated tubes and evaporates while some of it remains in liquid form and creates brine at the bottom of the cell. The vapor created is directed into the tubes and is used as heating medium into the next effect. The process is repeated in a series of cells (multiple-effect) where each subsequent unit is at a lower temperature and at a lower pressure. The process is very low on electrical consumption compared to MSF and does not require any seawater pre-treatment. Like MSF, MED plants can be installed next to large power plants and benefit from wasted heat.

Vapor-Compression Desalination

In some applications, a thermocompressor can be used to increase both the pressure and the temperature of the vapor. These thermocompressors can be implemented before the first cell in the MED process. In applications where steam is not available, a Mechanical Vapor Compressor (MVC) can be used to recycle the vapor from the last cell in the MED process.

Ion Exchange Technology

This technology is usually used for water softening rather than for desalination. In simplistic terms, saltwater passes through synthetic resin beads where salt ions from the feedwater are replaced by other ions, producing potable water.

Membrane processes

There are different levels of membrane filtration based on the application and the intensity of separation required.

Figure 23 The different filtration processes

Filtration Process	Pore Size	Pressure Required	Comments
Classic filtration	> 10 µm		Removes sand, pollen, human air
Microfiltration	> 0.1 µm	< 2 bar	Removes large bacteria, particles, yeast
Ultrafiltration	100 - 2 nm	1 - 10 bar	Removes bacteria, proteins, larger viruses
Nanofiltration	2-1 nm	3 - 20 bar	Removes viruses
Reverse Osmosis	< 1 nm	10 - 80 bar	Removes salts, small organic molecules

Source: Cowen and Company

Some of the membrane processes include:

Electrodialysis Reversal (EDR)

Electricity is applied to electrodes and polarity is changed periodically. The separation process is through ion permeable membranes that allow the passage of ions with a positive or negative charge while rejecting ions with the opposite charge. This technology can be implemented in addition to a RO system to increase water recovery efficiency. EDR has been commercially used since the 1960's and the typical lifetime of a membrane is 4 to 5 years.

Reverse Osmosis (RO)

The process uses a semipermeable membrane that is subject to high pressure on the salt (or contaminated) side of the RO. The water (or liquid) is forced through the membrane which retains salts, or other contaminants.

Nanofiltration (NF)

Nanofiltration is used by many industries (food, pharma, medicine, O&G, chemistry) as a method to soften water. For desalination purposes, nanofiltration is often used as a pre-treatment before reverse osmosis.

Forward Osmosis (FO)

The process is similar to reverse osmosis (RO) as it uses a semi-permeable membrane for water separation. However, the process uses osmotic pressure, normally occurring in nature, to avoid membrane fouling and requires less energy than RO. Can potentially be used as a low-energy front-end to an RO system.

Appendix 3 – Flint Crisis Timeline

Flint, MI has a population of about 100k in Genesee County, located 70 miles northwest of Detroit, which has historically provided Flint its water source.

March 2013: In an effort to save money, Flint decides to purchase its water from the Karegnondi Water Authority (KWA), which is building a $270 MM pipeline and pumping station project to deliver water to Genesee County from Lake Huron. However, the city has to find an alternative supplier until the KWA project comes online in 2016.

April 2013: After several back and forth discussions with the Detroit Water and Sewerage Department (DWSD), Flint signs a contract to purchase water from KWA on April 16, 2013. The next day, the DWSD sends a notice of termination that is effective in April 2014. Flint has to find an alternative source of water between April 2014 and the completion of the KWA project in 2016.

Summer 2013: The Flint River is designated to be the interim source of water for the city's residents until the completion of the KWA project.

April 2014: The city switches from the DWSD to the Flint River as its new source of water. Flint does not provide corrosion-control treatment to prevent lead from seeping into pipes.

August 2014: The city of Flint issues a boil-water advisory because of e-coli and other bacteria in the water and boosts the amount of chlorine while flushing the system.

September 2014: Another boil-water advisory is issued and the level of chlorine is increased again.

October 2014: The General Motors plant in Flint stop using the city's water after it notices it is corroding some engine parts.

January 2015: The city of Flint warns residents that its water contains byproducts of disinfectants that may cause liver and kidney problems or even cancer with long-term exposure. Meanwhile, the DWSD offers the option to reconnect to its network, at no cost, waving a $4 MM fee in exchange for a long-term supply agreement. Flint declines the offer.

Spring 2015: The EPA notifies the Michigan Department of Environmental Quality (MDEQ) about dangerous level of lead in Flint's water. The EPA is first contacted by one of Flint's resident.

Summer 2015: The MDEQ mentions that Flint is complying with lead and copper rules and that the issue is isolated to one home. Virginia Tech researchers warn that the corrosiveness of Flint's water is causing lead to leach into residents' water. The water in Flint is found to be 19 times more corrosive than Detroit's water.

September 2015: Flint issues a lead advisory to its residents.

October 2015: The city urges its residents not to drink the water. The Genesee County Health Department declares state of emergency and advises residents not to drink the water.

October 2015: The city of Flint switches back to the DWSD network. The MDWEQ recognizes that they have made a mistake in regards to corrosion control.

Winter 2015-2016: The city of Flint, the Genesee County, and the State of Michigan declare states of emergency.

January 2016: Residents of Flint are advised to drink bottled water or use lead filters until further notice.

April 2016: Felony and misdemeanor charges are issued against three state and city employees in connection to the Flint water crisis.

Appendix 4 – Survey Methodology

Our population was the 700+ municipalities in the U.S. with over 50k residents. Our goal to create the sample was to target ~50 respondents that provides broad diversification of size and geographic mix. We use population as a proxy for total dollars spent as the larger the city in terms of residents, the likely larger its capital and operating budgets. For this reason, we believe it was important to weigh each city based on its population to present an accurate picture of the total spending. To illustrate, New York represents over 7% of all the residents in our population and the largest 9 cities sum to over 20% of the total inhabitants in our population of 715 municipalities.

We created our sample by randomly choosing amongst the 700+ largest municipalities and giving each city a population weighted factor – therefore a company with 200k residents had twice the odds of being selected than one with 100k inhabitants.

Figure 24 Total survey population by muni size

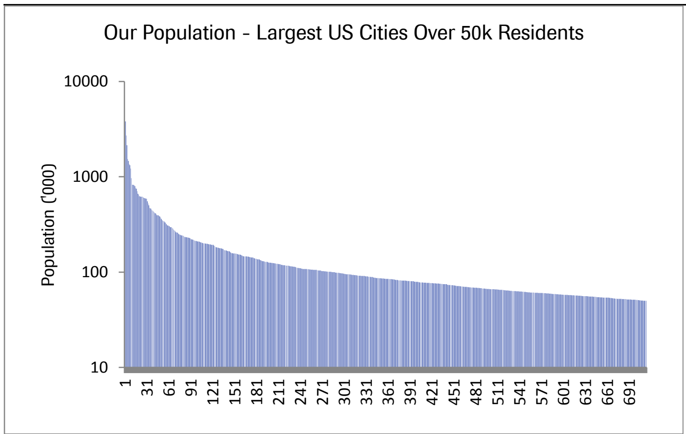
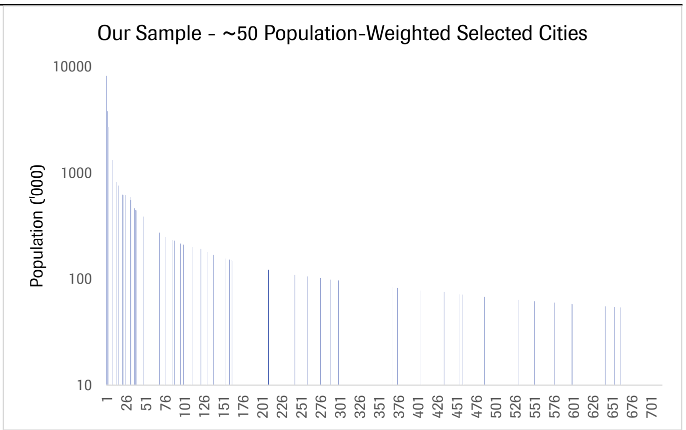


Figure 25 Population-weighted selection to create our sample

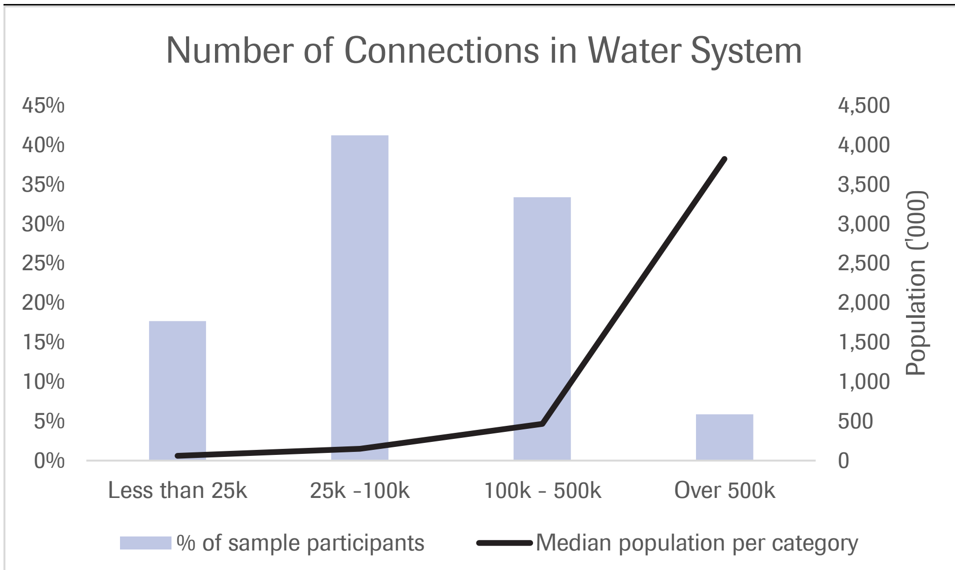


Source: U.S. Census Bureau, Cowen and Company May 2016 Muni Spending Survey

From the charts above, we can visually assess how representative our sample is compared to our population. The dispersion is more concentrated on the left side of the chart where municipalities have higher odds to be selected. The Y-axis population values are expressed using a logarithmic scale to better represent the variance between large and small cities.

The correlation between the size of the water network (measured in number of connections and asked in our survey) and the median population of the municipality by network size is presented below.

Figure 26 Municipalities' median population based on the size of the water network (measured in number of connections)



Source: Cowen and Company May 2016 Muni Spending Survey

Each municipality has been contacted over the phone individually and was asked a series of 10 questions. The head of budget office was targeted, but in most cases we required the input of multiple people to successfully complete the survey. Responses are based on actual and anticipated budgets.

Figure 27 XYL Income Statement

XYL Consolidated Income Statement ($ in millions)	1Q15	2Q15	3Q15	4Q15	FY2015E	1Q16	2Q16E	3Q16E	4Q16E	FY2016E	FY2017E
Revenue	837	920	902	994	3,653	847	930	948	1,058	3,783	3,941
Cost of revenue	522	572	551	604	2,249	518	570	562	616	2,265	2,347
Gross Profit	**315**	**348**	**351**	**390**	**1,404**	**329**	**361**	**386**	**442**	**1,518**	**1,594**
Gross Profit Margin %	*37.6%*	*37.8%*	*38.9%*	*39.2%*	*38.4%*	*38.8%*	*38.7%*	*40.7%*	*41.8%*	*40.1%*	*40.4%*
Selling, general and administrative expenses	206	218	207	223	854	219	216	220	246	902	916
% of revenue	*24.6%*	*23.7%*	*22.9%*	*22.4%*	*23.4%*	*25.9%*	*23.3%*	*23.3%*	*23.3%*	*23.8%*	*23.3%*
Separation costs	-	-	-	-	-	-	-	-	-	-	-
Research and development	23	25	23	24	95	25	29	29	29	112	120
% of revenue	*2.7%*	*2.7%*	*2.5%*	*2.4%*	*2.6%*	*3.0%*	*3.1%*	*3.1%*	*2.7%*	*3.0%*	*3.0%*
Restructuring and asset impairments charges, net	3	1	1	1	6	6	6	6	6	25	25
Total Other Operating Expense	**232**	**244**	**231**	**248**	**955**	**250**	**252**	**256**	**281**	**1,038**	**1,061**
Operating Income	**83**	**104**	**120**	**142**	**449**	**79**	**109**	**130**	**161**	**479**	**$533**
Other non-operating (expense), net)	(1)	1	-	-	-	-	-	-	-	-	-
Interest expense	(14)	(14)	(13)	(14)	(55)	(14)	(18)	(12)	(12)	(56)	(46)
Gain from sale of business	9	-	-	-	9					-	
Net Income Before Taxes	**77**	**91**	**107**	**128**	**403**	**65**	**90**	**119**	**149**	**424**	**486**
Income tax expense	13	17	19	14	63	(1)	18	24	30	71	97
Effective Tax Rate	*16.9%*	*18.7%*	*17.8%*	*10.9%*	*15.6%*	*-1.5%*	*20.0%*	*20.0%*	*20.0%*	*16.7%*	*20.0%*
Net Income	**64**	**74**	**88**	**114**	**340**	**66**	**72**	**95**	**119**	**353**	**389**
Basic Weighted Average Shares	182.1	181.5	180.8	179.2	180.9	178.6	177.2	176.0	174.8	176.6	172.3
Diluted Weighted Average Shares	183.1	182.3	181.6	179.8	181.7	179.3	177.9	176.7	175.4	177.3	173.0
Estimated ending diluted shares	*181.7*	*181.8*	*179.8*	*178.4*		*178.5*	*177.3*	*176.0*	*174.8*		*171.1*
Basic EPS	**$0.35**	**$0.41**	**$0.49**	**$0.64**	**$1.88**	**$0.37**	**$0.41**	**$0.54**	**$0.68**	**$2.00**	**$2.26**
Diluted EPS	**$0.35**	**$0.41**	**$0.48**	**$0.63**	**$1.86**	**$0.37**	**$0.41**	**$0.54**	**$0.68**	**$1.98**	**$2.25**
Dividends	$0.14	$0.14	$0.14	$0.14	$0.56	$0.15	$0.15	$0.15	$0.15	$0.62	$0.64
Current Year Payout Ratio (GAAP)					*30%*					*31%*	*28%*
Current Year Payout Ratio (adjusted)					*30%*					*30%*	*27%*
Prior Year Payout Ratio (GAAP)					*31%*					*33%*	*32%*
Prior Year Payout Ratio (adjusted)					*29%*					*34%*	*31%*
Non-GAAP Metrics											
Operating Income	**$83**	**$104**	**$120**	**$142**	**$449**	**$79**	**$109**	**$130**	**$161**	**$479**	**533**
Separation costs	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*
Restructuring and realignment costs	*$6*	*$6*	*$4*	*$4*	*$20*	*$9*	*$6*	*$6*	*$6*	*$28*	*$25*
Other	*$1*	*$0*	*$0*	*$0*	*$1*	*$4*	*$0*	*$0*	*$0*	*$4*	*$0*
Adjusted Operating Income	**$90**	**$110**	**$124**	**$146**	**$470**	**$92**	**$115**	**$137**	**$167**	**$511**	**$558**
Adjusted Operating Margin %	*10.8%*	*12.0%*	*13.7%*	*14.7%*	*12.9%*	*10.9%*	*12.4%*	*14.4%*	*15.8%*	*13.5%*	*14.1%*
Incremental Margin %	*5.8%*	*17.6%*	*16.4%*	*14.6%*	*13.7%*	*20.0%*	*50.1%*	*27.5%*	*33.2%*	*31.5%*	*29.5%*
Pretax Net Income	**$77**	**$91**	**$107**	**$128**	**$403**	**$65**	**$90**	**$119**	**$149**	**$424**	**$486**
Interest expense (income), net	*$13*	*$14*	*$13*	*$14*	*$54*	*$14*	*$18*	*$12*	*$12*	*$56*	*$46*
Depreciation and Amortization	*$35*	*$34*	*$33*	*$31*	*$133*	*$32*	*$34*	*$34*	*$34*	*$134*	*$138*
Stock compensation	*$4*	*$4*	*$3*	*$4*	*$15*	*$6*	*$5*	*$5*	*$5*	*$21*	*$25*
EBITDA	**$129**	**$143**	**$156**	**$177**	**$605**	**$117**	**$148**	**$169**	**$200**	**$634**	**$696**
Separation costs	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*
Restructuring and realignment costs	*$6*	*$6*	*$4*	*$4*	*$20*	*$9*	*$6*	*$6*	*$6*	*$28*	*$25*
Other	*($7)*	*$0*	*$0*	*$0*	*($7)*	*$4*	*$0*	*$0*	*$0*	*$4*	*$0*
Adjusted EBITDA	**$128**	**$149**	**$160**	**$181**	**$618**	**$130**	**$154**	**$176**	**$206**	**$666**	**$721**
Adjusted EBITDA Margin %	*15.3%*	*16.2%*	*17.7%*	*18.2%*	*16.9%*	*15.3%*	*16.6%*	*18.5%*	*19.5%*	*17.6%*	*18.3%*
Incremental Margin %	*5.8%*	*22.4%*	*21.3%*	*22.9%*	*17.9%*	*20.0%*	*50.1%*	*34.0%*	*39.5%*	*36.9%*	*34.6%*
Net Income	**$64**	**$74**	**$88**	**$114**	**$340**	**$66**	**$72**	**$95**	**$119**	**$353**	**$389**
Separation / restructuring / realignment, net	*$0*	*$4*	*$2*	*($6)*	*$0*	*($4)*	*$5*	*$5*	*$5*	$11	$20
Other	*($4)*	*$0*	*$0*	*$0*	*($4)*	*$0*	*$6*	*$0*	*$0*	$6	$0
Adjusted Net Income	**$60**	**$78**	**$90**	**$108**	**$336**	**$62**	**$83**	**$100**	**$124**	**$370**	**$409**
Adjusted Diluted EPS	**$0.33**	**$0.43**	**$0.49**	**$0.60**	**$1.85**	**$0.35**	**$0.47**	**$0.57**	**$0.71**	**$2.08**	**$2.37**

Source: Company Reports, Cowen and Company

Figure 28 XYL DCF Analysis

XYL DCF Analysis

Discount Rate	**9.9%**	**Enterprise Value**	**$8,920.3**
Terminal Growth Rate	**3.0%**	Debt	1,277.0
		Cash	742.1
		Preferred	0.0
		Minority Interest	0.0
		Equity Value	**$8,385.4**
		Shares Outstanding	174.8
		Price	**$47.96**

DCF Sensitivity Analysis

Terminal Growth	Discount Rate 8.0%	9.0%	9.9%	11.0%	12.0%
1.0%	$57.36	$48.68	$42.62	$36.76	$32.52
2.0%	$62.31	$51.95	$44.94	$38.35	$33.67
3.0%	$69.23	$56.31	**$47.94**	$40.33	$35.07
4.0%	$79.61	$62.41	$51.96	$42.88	$36.83
5.0%	$96.90	$71.56	$57.62	$46.28	$39.08
6.0%	$131.50	$86.82	$66.18	$51.04	$42.09

	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	Terminal
Revenue	3,783.0	3,940.9	4,129.1	4,321.0	4,518.4	4,713.6	4,917.8	5,133.0	5,359.9	5,585.9	5,822.9	6,071.5	6,332.3	6,606.2	6,893.7	
COGS	2,260.4	2,347.1	2,462.8	2,557.2	2,655.2	2,756.9	2,863.6	2,975.7	3,093.5	3,209.6	3,330.8	3,457.4	3,589.7	3,728.0	3,872.6	
Gross Profit	**1,522.6**	**1,593.8**	**1,666.3**	**1,763.8**	**1,863.2**	**1,956.7**	**2,054.1**	**2,157.2**	**2,266.4**	**2,376.3**	**2,492.1**	**2,614.0**	**2,742.6**	**2,878.2**	**3,021.1**	
Gross Margin %	*40.2%*	*40.4%*	*40.4%*	*40.8%*	*41.2%*	*41.5%*	*41.8%*	*42.0%*	*42.3%*	*42.5%*	*42.8%*	*43.1%*	*43.3%*	*43.6%*	*43.8%*	
SG&A	901.6	916.2	929.1	950.6	982.7	1,025.2	1,069.6	1,116.4	1,165.8	1,214.9	1,266.5	1,320.5	1,377.3	1,436.8	1,499.4	
% of sales	*23.8%*	*23.3%*	*22.5%*	*22.0%*	*21.8%*	*21.8%*	*21.8%*	*21.8%*	*21.8%*	*21.8%*	*21.8%*	*21.8%*	*21.8%*	*21.8%*	*21.8%*	
R&D	112.0	120.0	132.1	151.2	158.1	165.0	172.1	179.7	187.6	195.5	203.8	212.5	221.6	231.2	241.3	
% of sales	*3.0%*	*3.0%*	*3.2%*	*3.5%*	*3.5%*	*3.5%*	*3.5%*	*3.5%*	*3.5%*	*3.5%*	*3.5%*	*3.5%*	*3.5%*	*3.5%*	*3.5%*	
Operating Expenses	**1,013.6**	**1,036.2**	**1,061.2**	**1,101.9**	**1,140.9**	**1,190.2**	**1,241.7**	**1,296.1**	**1,353.4**	**1,410.4**	**1,470.3**	**1,533.0**	**1,598.9**	**1,668.1**	**1,740.7**	
Adjusted Operating Income	**509.0**	**557.5**	**605.1**	**662.0**	**722.3**	**766.5**	**812.4**	**861.2**	**913.1**	**965.9**	**1,021.8**	**1,081.0**	**1,143.7**	**1,210.1**	**1,280.5**	
Operating Margin %	*13.5%*	*14.1%*	*14.7%*	*15.3%*	*16.0%*	*16.3%*	*16.5%*	*16.8%*	*17.0%*	*17.3%*	*17.5%*	*17.8%*	*18.1%*	*18.3%*	*18.6%*	
Incremental Margin %		*30.8%*	*25.3%*	*29.6%*	*30.6%*	*22.6%*	*22.5%*	*22.7%*	*22.9%*	*23.4%*	*23.6%*	*23.8%*	*24.0%*	*24.3%*	*24.5%*	
Other	(20.8)	(25.0)	(25.0)	(25.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Adjusted EBIT	**488.2**	**532.5**	**580.1**	**637.0**	**722.3**	**766.5**	**812.4**	**861.2**	**913.1**	**965.9**	**1,021.8**	**1,081.0**	**1,143.7**	**1,210.1**	**1,280.5**	
Income Tax	81.5	106.5	116.0	127.4	144.5	153.3	162.5	172.2	182.6	193.2	204.4	216.2	228.7	242.0	256.1	
Effective Tax Rate	*16.7%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	
NOPAT	**406.7**	**426.0**	**464.1**	**509.6**	**577.9**	**613.2**	**649.9**	**688.9**	**730.5**	**772.7**	**817.4**	**864.8**	**915.0**	**968.1**	**1,024.4**	
Capex	(127.0)	(125.0)	(135.2)	(141.5)	(148.0)	(154.4)	(161.0)	(168.1)	(175.5)	(182.9)	(190.7)	(198.8)	(207.4)	(216.3)	(225.7)	
M&A estimate		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
D&A	134.0	138.0	153.6	160.7	168.1	175.3	182.9	190.9	199.4	207.8	216.6	225.9	235.6	245.7	256.4	
Pension cash contribution above expense	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Stock comp	20.0	25.0	24.8	25.9	27.1	28.3	29.5	30.8	32.2	33.5	34.9	36.4	38.0	39.6	41.4	
Working Capital	899.0	925.5	929.1	950.6	971.4	989.8	1,008.1	1,026.6	1,072.0	1,117.2	1,164.6	1,214.3	1,266.5	1,321.2	1,378.7	
% of Sales	*23.8%*	*23.5%*	*22.5%*	*22.0%*	*21.5%*	*21.0%*	*20.5%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*	
Working capital increase / (decrease)	55.0	26.5	3.6	21.6	20.8	18.4	18.3	18.5	45.4	45.2	47.4	49.7	52.2	54.8	57.5	
FCF	**378.7**	**437.5**	**503.7**	**533.2**	**604.3**	**644.1**	**683.0**	**724.1**	**741.1**	**785.9**	**830.9**	**878.5**	**929.0**	**982.4**	**1,038.9**	**15,508.8**
y/y growth		*15.5%*	*15.1%*	*5.9%*	*13.3%*	*6.6%*	*6.0%*	*6.0%*	*2.3%*	*6.0%*	*5.7%*	*5.7%*	*5.7%*	*5.7%*	*5.8%*	
Capex as % of sales	*-3.4%*	*-3.2%*	*-3.3%*	*-3.3%*	*-3.3%*	*-3.3%*	*-3.3%*	*-3.3%*	*-3.3%*	*-3.3%*	*-3.3%*	*-3.3%*	*-3.3%*	*-3.3%*	*-3.3%*	
D&A as % of sales	*3.5%*	*3.5%*	*3.7%*	*3.7%*	*3.7%*	*3.7%*	*3.7%*	*3.7%*	*3.7%*	*3.7%*	*3.7%*	*3.7%*	*3.7%*	*3.7%*	*3.7%*	
Stock comp as % of sales	*0.5%*	*0.6%*	*0.6%*	*0.6%*	*0.6%*	*0.6%*	*0.6%*	*0.6%*	*0.6%*	*0.6%*	*0.6%*	*0.6%*	*0.6%*	*0.6%*	*0.6%*	
Undiscounted Values for DCF	*378.7*	*437.5*	*503.7*	*533.2*	*604.3*	*644.1*	*683.0*	*724.1*	*741.1*	*785.9*	*830.9*	*878.5*	*929.0*	*982.4*	*16,547.7*	
Discounted Values for DCF	*355.9*	*374.1*	*391.9*	*377.5*	*389.3*	*377.5*	*364.3*	*351.4*	*327.3*	*315.8*	*303.8*	*292.3*	*281.2*	*270.6*	*4,147.4*	
Terminal as % of total EV	*46.5%*															

Source: Company Reports, Cowen and Company

Figure 29 XYL Earnings Build

XYL Earnings Build	2014	2015E	2016E	2017E	2018E	2019E	2020E
Revenue	3,916	3,653	3,783	3,941	4,129	4,321	4,518
Cost of revenue	2,403	2,249	2,265	2,347	2,463	2,557	2,655
Gross Profit	**1,513**	**1,404**	**1,518**	**1,594**	**1,666**	**1,764**	**1,863**
Gross Profit Margin %	*38.6%*	*38.4%*	*40.1%*	*40.4%*	*40.4%*	*40.8%*	*41.2%*
Selling, general and administrative expenses	920	854	902	916	929	951	983
% of revenue	*23.5%*	*23.4%*	*23.8%*	*23.3%*	*22.5%*	*22.0%*	*21.8%*
Separation costs	0	0	0	0	0	0	0
Research and development	104	95	112	120	132	151	158
% of revenue	*2.7%*	*2.6%*	*3.0%*	*3.0%*	*3.2%*	*3.5%*	*3.5%*
Restructuring and asset impairments charges, net	26	6	25	25			
Total Other Operating Expense	**1,050**	**955**	**1,038**	**1,061**	**1,061**	**1,102**	**1,141**
Operating Income	**463**	**449**	**479**	**533**	**605**	**662**	**722**
Other non-operating (expense), net)	1	0	0	0			
Interest expense	(54)	(55)	(56)	(46)	(54)	(57)	(57)
Gain from sale of business	11	9	0	0			
Net Income Before Taxes	**421**	**403**	**424**	**486**	**551**	**605**	**665**
Income tax expense	84	63	71	97	110	121	133
Effective Tax Rate	*20.0%*	*15.6%*	*16.7%*	*20.0%*	*20.0%*	*20.0%*	*20.0%*
Net Income	**337**	**340**	**353**	**389**	**441**	**484**	**532**
Basic Weighted Average Shares	183.1	180.9	176.6	172.3	170.4	170.4	170.4
Diluted Weighted Average Shares	184.2	181.7	177.3	173.0	171.1	171.1	171.1
Basic EPS	**$1.84**	**$1.88**	**$2.00**	**$2.26**	**$2.59**	**$2.84**	**$3.12**
Diluted EPS	**$1.82**	**$1.86**	**$1.98**	**$2.25**	**$2.58**	**$2.83**	**$3.11**
Dividends	**$0.51**	**$0.56**	**$0.62**	**$0.64**	**$0.77**	**$0.85**	**$0.93**
Current Year Payout Ratio (GAAP)	*28.1%*	*30.3%*	*31.3%*	*28.4%*	*30.0%*	*30.0%*	*30.0%*
Current Year Payout Ratio (adjusted)	*26.1%*	*30.5%*	*29.7%*	*30.0%*	*30.0%*	*30.0%*	*30.0%*
Prior Year Payout Ratio (GAAP)	*42.1%*	*31.0%*	*33.3%*	*32.3%*	*34.3%*	*32.9%*	*33.0%*
Prior Year Payout Ratio (adjusted)	*30.6%*	*28.7%*	*33.5%*	*30.7%*	*32.7%*	*32.9%*	*33.0%*
Non-GAAP Metrics							
Operating Income	**463**	**449**	**479**	**533**	**605**	**662**	**722**
Separation costs	*0*	*0*	*0*	*0*			
Restructuring and realignment costs	*43*	*20*	*28*	*25*	*0*	*0*	*0*
Other	*0*	*1*	*4*	*0*			
Adjusted Operating Income	**506**	**470**	**511**	**558**	**605**	**662**	**722**
Adjusted Operating Margin %	*12.9%*	*12.9%*	*13.5%*	*14.1%*	*14.7%*	*15.3%*	*16.0%*
Incremental Margin %	*69.6%*	*13.7%*	*31.5%*	*29.5%*	*25.3%*	*29.6%*	*30.6%*
Pretax Net Income	**421**	**403**	**424**	**486**	**551**	**605**	**665**
Interest expense (income), net	*52*	*54*	*56*	*46*	*54*	*57*	*57*
Depreciation and Amortization	*142*	*133*	*134*	*138*	*154*	*161*	*168*
Stock compensation	*18*	*15*	*21*	*25*	*25*	*26*	*27*
EBITDA	**633**	**605**	**634**	**696**	**783**	**849**	**918**
Separation costs	*0*	*0*	*0*	*0*			
Restructuring and realignment costs	*43*	*20*	*28*	*25*	*0*	*0*	*0*
Other	*(11)*	*(7)*	*4*	*0*	*0*	*0*	*0*
Adjusted EBITDA	**665**	**618**	**666**	**721**	**783**	**849**	**918**
Adjusted EBITDA Margin %	*17.0%*	*16.9%*	*17.6%*	*18.3%*	*19.0%*	*19.6%*	*20.3%*
Incremental Margin %	*54.4%*	*17.9%*	*36.9%*	*34.6%*	*33.4%*	*34.0%*	*34.9%*
Net Income	**337**	**340**	**353**	**389**	**441**	**484**	**532**
Separation / restructuring / realignment, net	*25*	*0*	*11*	*20*	*0*	*0*	*0*
Other	*0*	*(4)*	*6*	*0*	*0*	*0*	*0*
Adjusted Net Income	**362**	**336**	**370**	**409**	**441**	**484**	**532**
Adjusted Diluted EPS	**$1.97**	**$1.85**	**$2.08**	**$2.37**	**$2.58**	**$2.83**	**$3.11**

Source: Company reports, Cowen and Company

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Ticker	Rating	Price*	Price Target
CFX	Outperform	$26.06	$33.00
GVA	Outperform	$42.40	$55.00
MWA	Outperform	$10.46	$12.50
ROP	Outperform	$173.61	$210.00
XYL ▪	Outperform	$41.25	$48.00

Ticker	Rating	Price*	Price Target
FLS	Market Perform	$46.36	$41.00
IEX	Market Perform	$80.79	$68.00
PNR	Market Perform	$56.88	$55.00
WTS	Market Perform	$55.90	$55.00

*As of 05/04/2016

■ Rating and/or Price Target Change

Valuation Methodology And Risks

Valuation Methodology

We utilize multiple analysis and discounted cash flow (DCF) analysis to value companies under coverage. We employ both EV/EBITDA and P/E multiple analysis and look at historical valuation multiples (typically 5- and 10-year averages) as well as current and historical multiples for competitor or representative companies. We evaluate the subject company independently and in terms of its comp group. In certain instances, we may look at current/recent transaction multiples to evaluate the subject company. When utilizing DCF analysis, we include a sensitivity table to both discount and terminal growth rates.

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Investment Risks

Industrial Flow Control:

· An overall decline in the pace of the industrial recovery seen in the US, Europe, and emerging markets such as China (as evidenced through declining PMI readings) could have negative implications in terms of industrial capex and could lead to additional project delays.

· Significant, lasting changes in the prices of key commodities, such as oil and natural gas could have material impact on upstream, midstream, and downstream applications. For example, a sharp increase in domestic natural gas projects could make LNG export facilities in the US less attractive and cause delays or cancellations of planned domestic chemical facilities. Sharp declines in oil and gas prices could lead to reduced production activity and therefore reduce demand for midstream logistics and downstream processing applications.

Global economic slowdown and its impact on energy markets – Engineering & construction companies generally have a cyclical industry concentration (e.g., oil and gas, chemicals, power generation) and are materially impacted by macroeconomic conditions that affect energy demand and associated capital investment on new projects. Prolonged weakness in the global economy could lead to reduced investment in global resource development and negatively impact engineering & construction companies' performance.

High level of industry competition – The global engineering & construction industry is highly competitive. In general there are no companies in the space that maintain a dominant position, leading to competitive bidding which could severely pressure margins in tight environments. The failure to win new/key contracts could lead to periods of underutilization and poor performance. Conversely, the win of a contract at severely discounted margins could lead to substantial losses depending on the contract structure.

Project award timing and Contract structure risks – Outlook is materially affected by the timing of potential project awards and its performance is impacted by the structure of awarded contracts. Significant delays in a project award, the cancellation of a project or the unsuccessful bid on an expected project award can adversely impact cash flow and stock performance. A significant composition of long-term, fixed-price contracts increases a company's exposure to risks associated with project cost overruns which could lead to substantial losses. Similarly, the inability to collect on cost-reimbursable items could lead to losses or lower than expected profits.

Major project complexities add increased risks – Large-scale projects tend to incorporate a higher level of technical complexity and may be located in significantly challenging locations. Material delays or site accidents may have an adverse effect on a company's performance, lead to costly litigation or negatively impact the company's reputation.

Government spending restraint – Government funding for projects is typically appropriated annually for In the current environment of sequestration and increased scrutiny on government budgets, the evaluation periods have lengthened, delaying certain awards and other programs have experienced significant cuts. This adds to the uncertainty of funding government projects which may negatively impact a company's future results.

Foreign currency exposure – With projects located around the world, market risk derived from currency exchange exposure could lead to material fluctuations in financial results.

Water Infrastructure and Equipment:

· Declining state and local tax receipts or water tariffs charged to customers (typically in conjunction with an economic recession) would likely limit the ability of municipalities to increase capex and opex spending, leading to reduced demand for transport, treatment, and testing products.

· An overall decline in the US housing market (potentially due to higher mortgage rates) could lead to reduced demand for products related to new community buildouts and lower renovation related spending.

Addendum

Analyst Certification

Each author of this research report hereby certifies that (i) the views expressed in the research report accurately reflect his or her personal views about any and all of the subject securities or issuers, and (ii) no part of his or her compensation was, is, or will be related, directly or indirectly, to the specific recommendations or views expressed in this report.

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COWEN AND COMPANY RATING DEFINITIONS

Cowen and Company Rating System effective May 25, 2013

Outperform (1): The stock is expected to achieve a total positive return of at least 15% over the next 12 months

Market Perform (2): The stock is expected to have a total return that falls between the parameters of an Outperform and Underperform over the next 12 months

Underperform (3): Stock is expected to achieve a total negative return of at least 10% over the next 12 months

Assumption: The expected total return calculation includes anticipated dividend yield

Cowen and Company Rating System until May 25, 2013

Outperform (1): Stock expected to outperform the S&P 500

Neutral (2): Stock expected to perform in line with the S&P 500

Underperform (3): Stock expected to underperform the S&P 500

Assumptions: Time horizon is 12 months; S&P 500 is flat over forecast period

Cowen Securities, formerly known as Dahlman Rose & Company, Rating System until May 25, 2013

Buy – The fundamentals/valuations of the subject company are improving and the investment return is expected to be 5 to 15 percentage points higher than the general market return

Sell – The fundamentals/valuations of the subject company are deteriorating and the investment return is expected to be 5 to 15 percentage points lower than the general market return

Hold – The fundamentals/valuations of the subject company are neither improving nor deteriorating and the investment return is expected to be in line with the general market return

Cowen And Company Rating Definitions

Distribution of Ratings/Investment Banking Services (IB) as of 03/31/16

Rating	Count	Ratings Distribution	Count	IB Services/Past 12 Months
Buy (a)	450	57.40%	92	20.44%
Hold (b)	324	41.33%	13	4.01%
Sell (c)	10	1.28%	0	0.00%

(a) Corresponds to "Outperform" rated stocks as defined in Cowen and Company, LLC's rating definitions. (b) Corresponds to "Market Perform" as defined in Cowen and Company, LLC's ratings definitions. (c) Corresponds to "Underperform" as defined in Cowen and Company, LLC's ratings definitions.

Note: "Buy", "Hold" and "Sell" are not terms that Cowen and Company, LLC uses in its ratings system and should not be construed as investment options. Rather, these ratings terms are used illustratively to comply with FINRA regulation.

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