

# New Financial Tools: Public Private Partnerships for Water

Chicago  
June 9, 2014  
Jim Perron



Illinois Retreat on Public  
Private Partnerships  
*NGA*



# World Wide Tendencies for Water Partnerships

## Challenges facing Cities today

- Modernization of water systems and capacity to attract needed talent
- Multiple stakeholders and citizens awareness. Demand for greater transparency and accountability
- Complex technology to meet new regulations
- Demand for better Environmental Performance

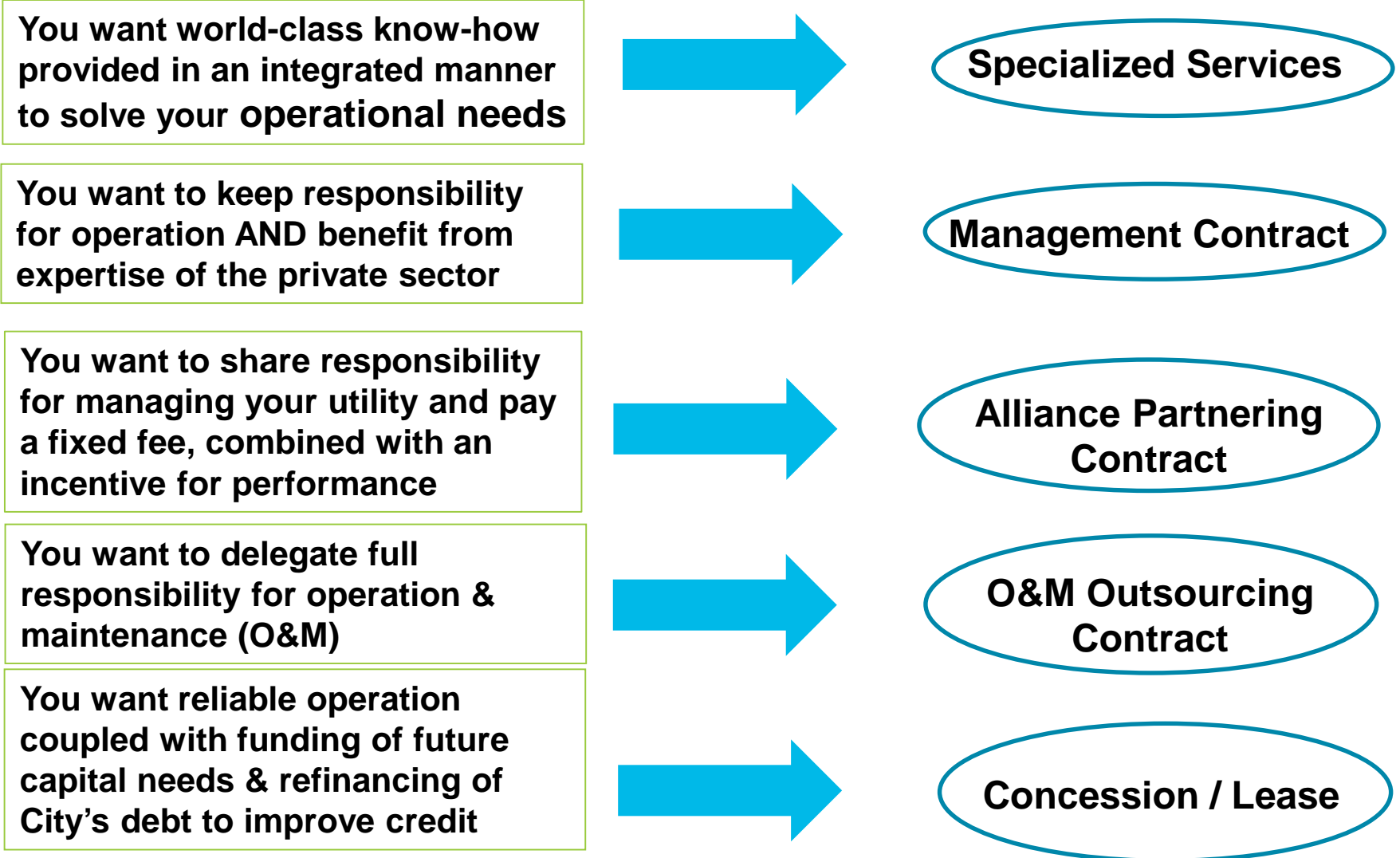
## Private operators value added

- Ability to manage complex situations based on broad range of experience
- Cost-effective solutions
- Knowhow of advanced technologies
- Cost efficient OPEX/CAPEX approach
- Ability to attract private financing

## Water Partnership Models

- Specialized Service Delivery:
  - Billing & Customer Service
  - Smart Metering
  - Non-Revenue Water Improvement
  - CSO Management and Control
  - Energy Management
  - IT Solutions for Smart Cities
- Public-Private O&M Outsourcing & Alliance Partnering Contracts
- BOT/DBO's for greenfield Water, Wastewater and Biosolid projects
- Concessions and Leases

# Choosing a Contract Model to Meet a City's Objectives



**After decades of neglect, investment can no longer be deferred in many U.S. cities....**

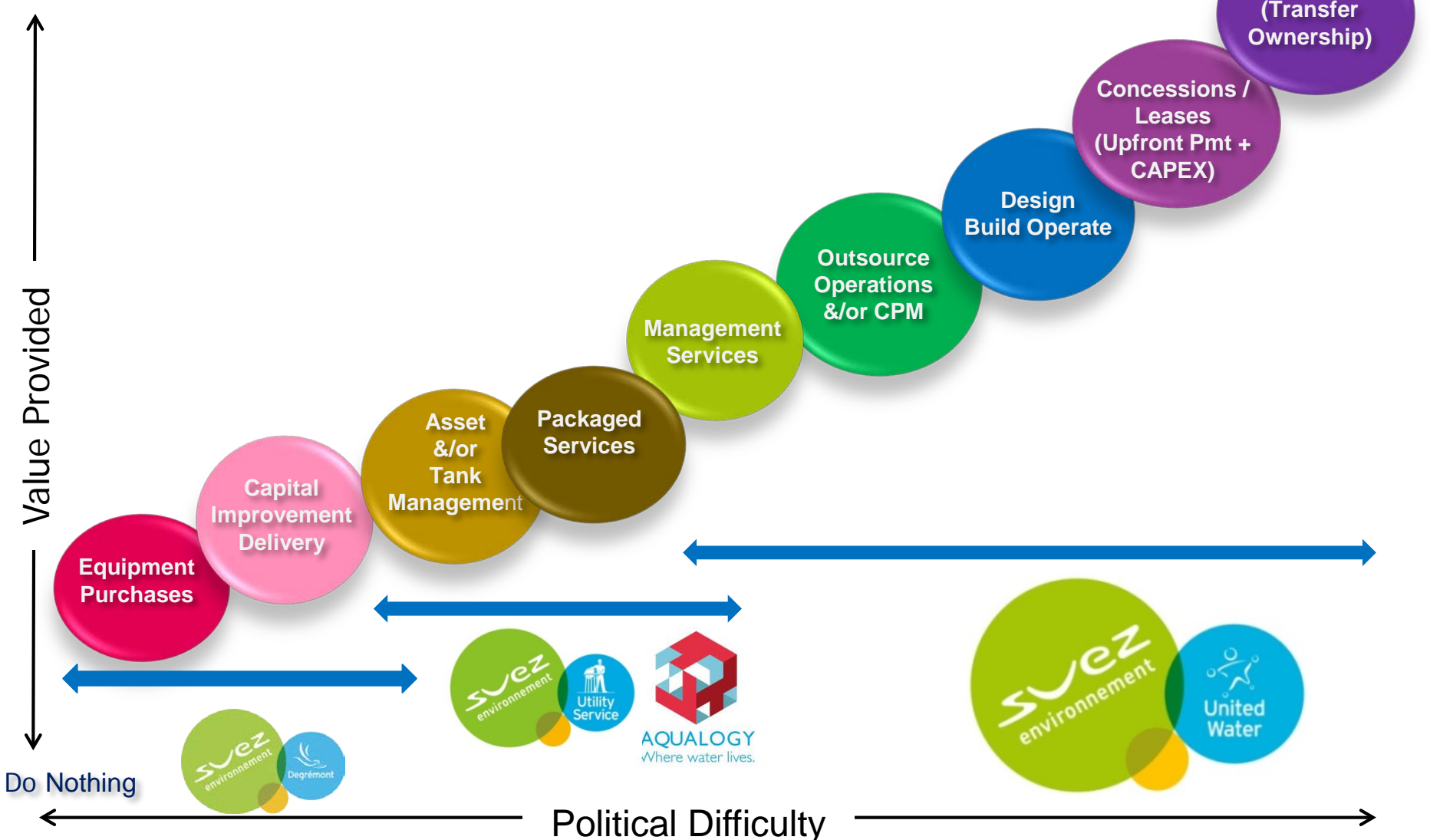
**WATER INFRASTRUCTURE RATED **



**\$1.3 trillion to upgrade our water & waste water systems over the next 25 years**

**.... municipalities need creative alternatives to meet America's water challenge!**

# Suez Environnement North America (SENA): Organized to meet *Market Needs*



# Tailoring contractual services to meet *market needs*

## Adding private capital



## O & M related

# All these elements together create our SOLUTION<sup>SM</sup>

**Adding private capital**



**O & M related**

# Our Solution<sup>SM</sup>

is an innovation in the U.S. water sector.



**"This really is an innovative approach, but I'm afraid we can't consider it. It's never been done before."**



# Bayonne's challenges and objectives

## Challenges

- Deeply leveraged – beyond underlying value of assets
- History of deferred investment in system assets
- Credit quality problems: city needs funds for other services

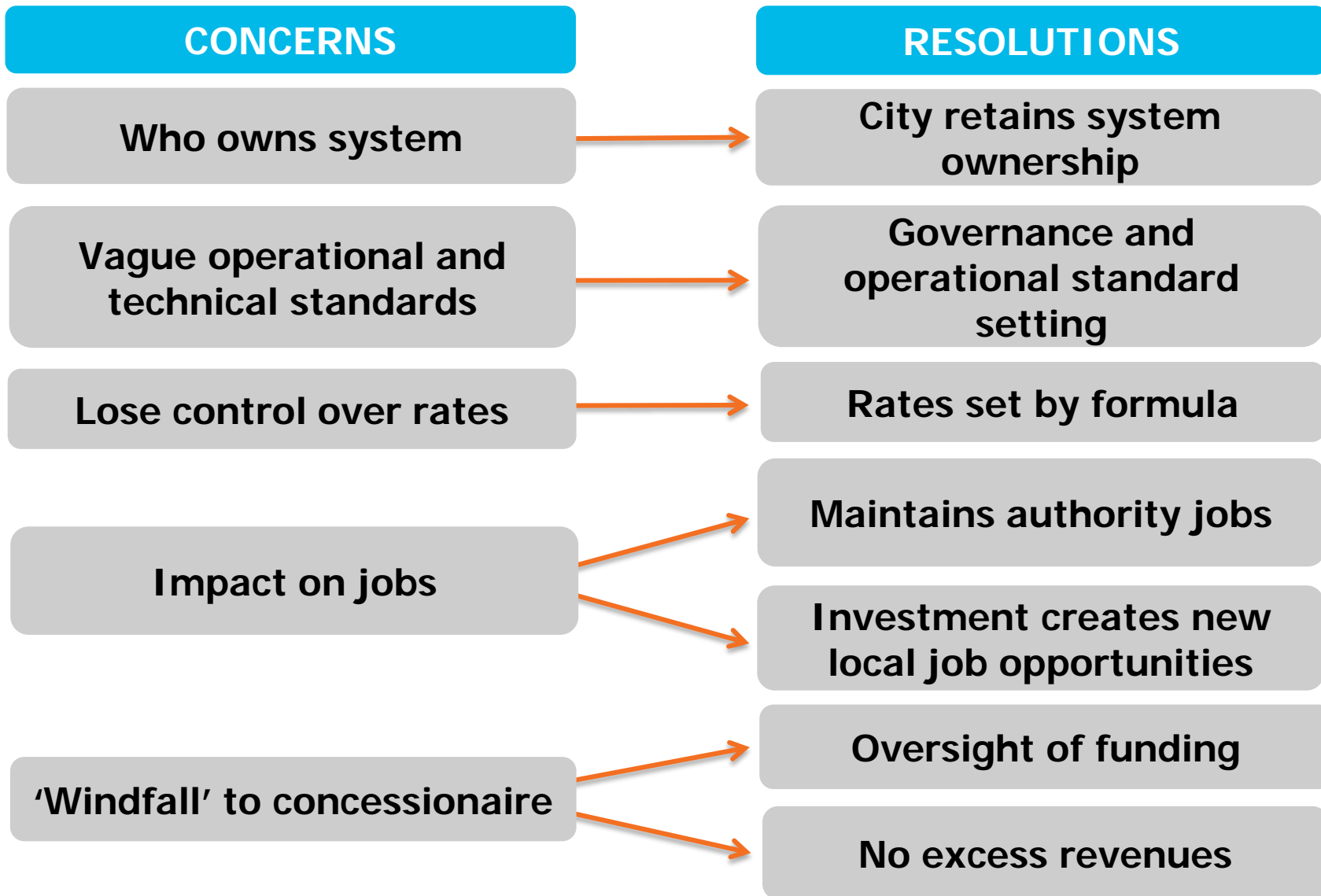


- Difficulty attracting qualified staff to manage the utility

## Objectives

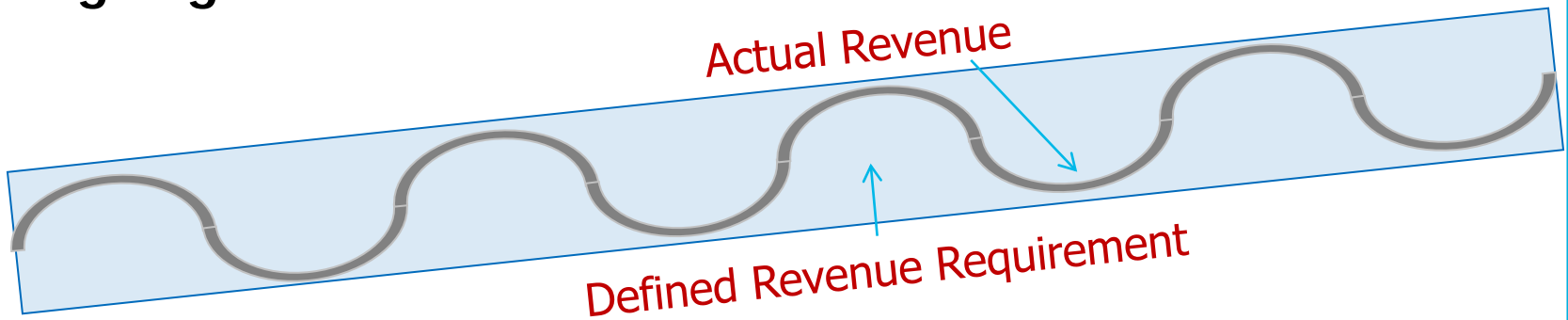
- Mechanisms for guaranteed capital improvements
- Improve asset condition and customer service
- Strengthen balance sheet and leave the Bayonne Municipal Utility Authority (BMUA) debt free
- Steady and predictable rate rises for consumers
- Maintain utility jobs and improve staff training

# Public officials in Bayonne had some questions...



# Long-term contract provisions provide customers greater reliability and stability

'Revenue path' approach limits rate increases, prevents windfall profits, and provides flexibility to guarantee ongoing investment



Improved system efficiency reduces operating costs




Capital investment reduces risk of service disruption and protects the environment

# Hidden value of Bayonne's asset is unlocked

- Upfront payment, eliminated \$125M of BMUA debt
- Capital investment to modernize water, sewer and storm water system of \$107M over 40 years
- Just 3 months after closing, Moody's Investors Service upgraded City's credit outlook.



Bayonne Mayor Mark A. Smith

 **Moody's Investors Service**  
*Global Credit Research*

'The stable outlook reflects the city's recent progress in reducing its debt burden through the lease-sale of the MUA operations...'

**Bayonne's mayor said that this transaction helped the city earn its first credit upgrade in 5 years**

# Major Progress Over the First Year of Contract

- Full GIS of Water and Sewer Systems
- Fixed Network AMI System installed
- Asset Management System installed
- Cleaned >28,900 feet of sewer main
- Cleaned & flushed >10,300 of water main
- 1,500+ hydrants inspected, 400+ valves exercised
- >2,500 hours of employee training
- Operational & safety improvements to CSO netting chambers – 75 tons collected
- New protective equipment including hard hats, boots, gloves & other safety essentials
- Office improvements & new vehicles to meet health & safety standards
- Comprehensive study of City's water infrastructure system underway to develop long-term asset management plan



**It took bold champions in Bayonne to take these first steps in using private capital to invest in America's water infrastructure.**



*"I can feel it! We're about to make a huge breakthrough."*

# Key Transaction Take-Aways

## ○ Set Realistic Goals

- Risk Allocation
- Rate Increases
- Capital Needs
- Avoid Trying to Solve Unrelated Problems

## ○ Prepare Extensive

### Due Diligence

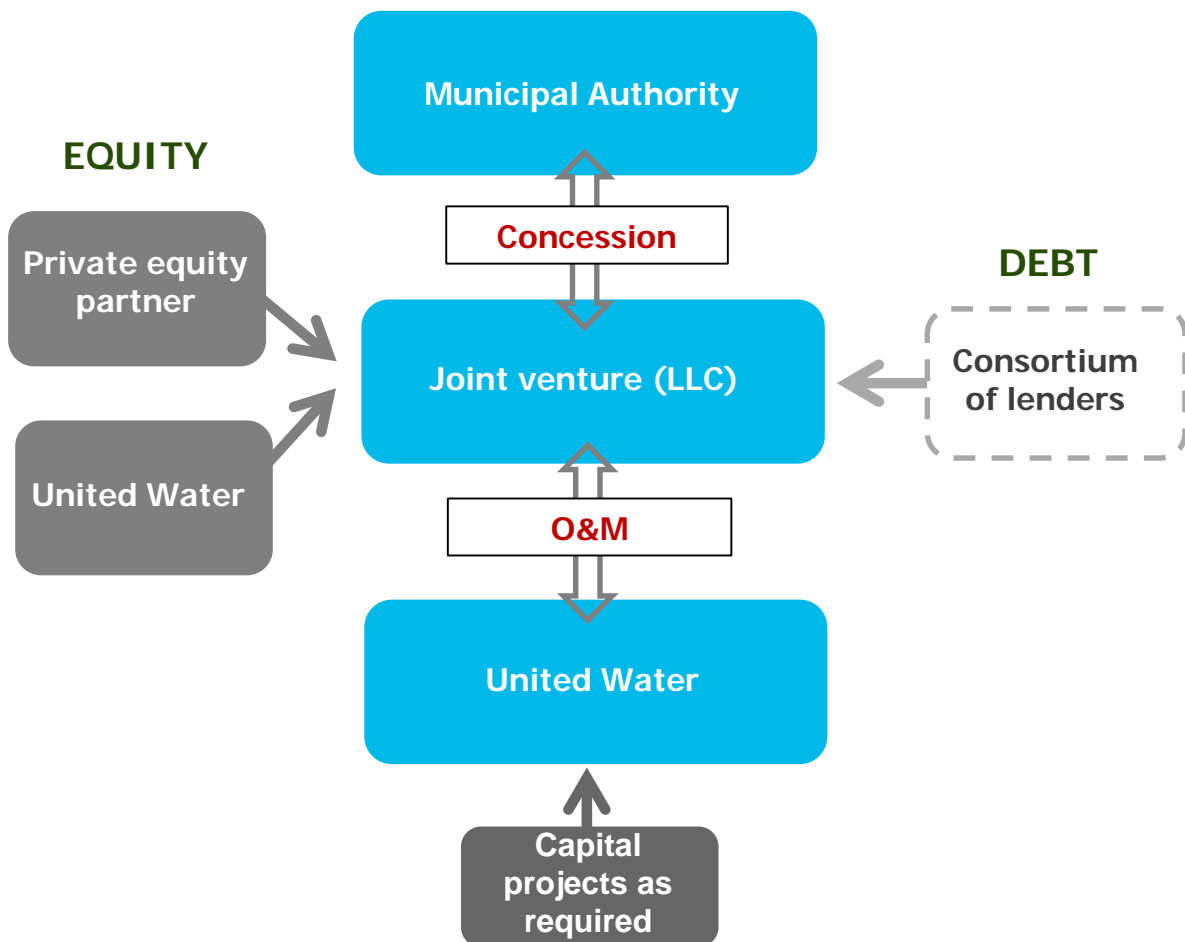
- Quality Due Diligence Package
- Tie Up Loose Ends

## ○ Engage Experienced Professional Team

- Engineering, Financial & Legal

## ○ Engage Stakeholders

- Employees, Users, Officials



Elements of the transaction structure



# SOLUTION<sup>SM</sup>

Investing in America's Water



**Jim Perron**  
**Director, Project Development**  
**United Water**  
**(317) 590-1383**  
[jim.perron@unitedwater.com](mailto:jim.perron@unitedwater.com)

**Thank You**





# Backup Slides

# Degradation of rivets on 48" aqueduct



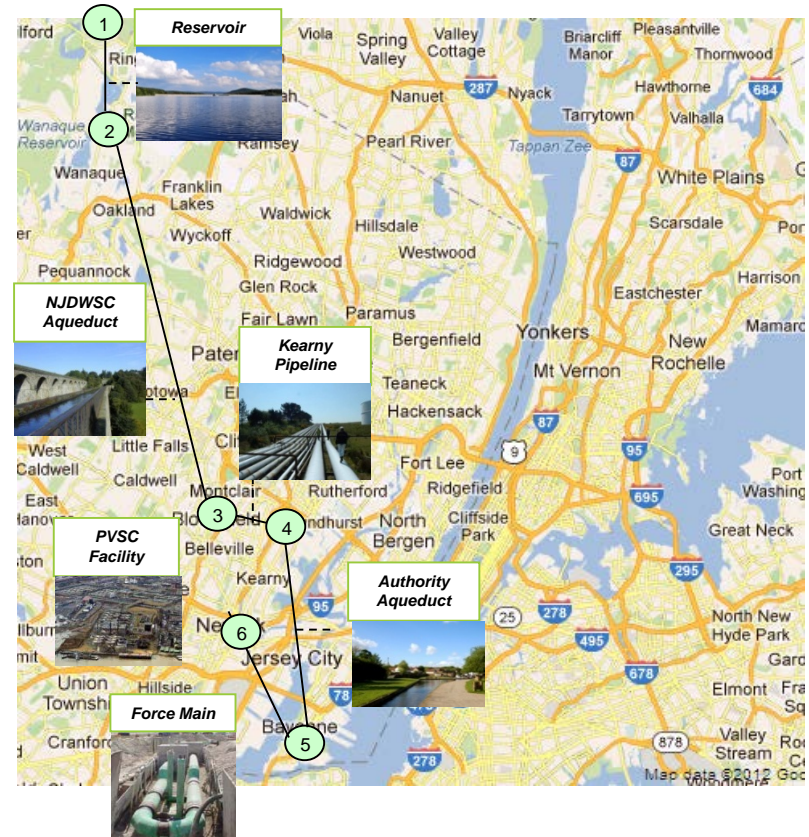
# The City of Bayonne

- The City of Bayonne lies in the heart of the Port of New York and New Jersey
- Traditional distribution, manufacturing, healthcare and port activities remain important to the city's economy



# Bayonne's water system

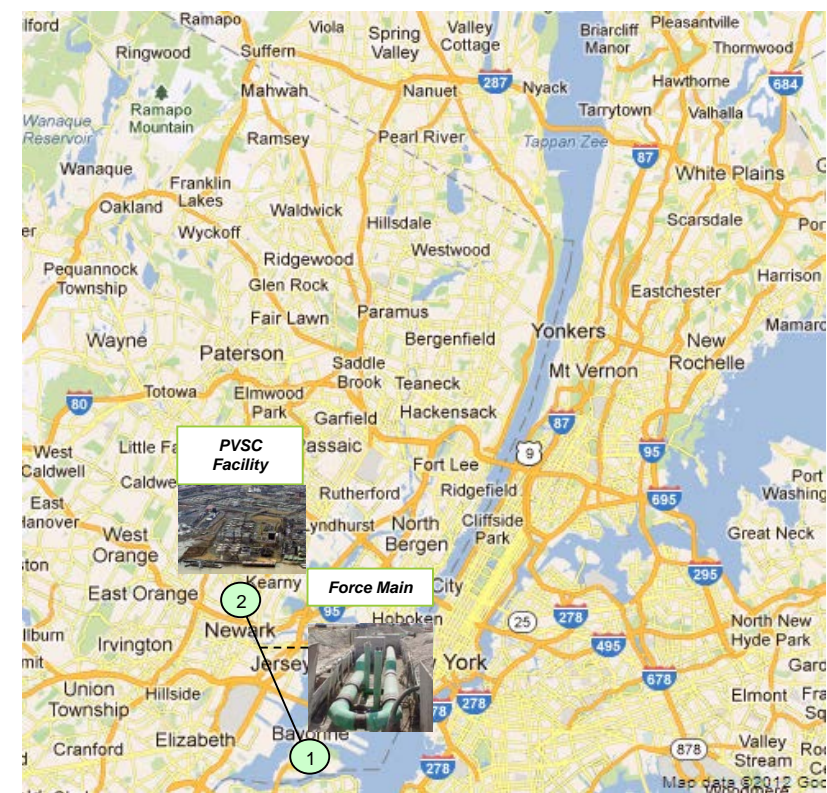
- More than 96 miles of mains including valves, fire hydrants etc.
- Water supplied from the North Jersey District Water Supply Commission's Wanaque and Monksville reservoirs
- Total system capacity is 17.6 MGD and on average uses 8.5 MGD



- 1 Monksville Reservoir
- 2 Wanaque Reservoir
- 3 Belleville
- 4 Kearny Water Distribution System
- 5 City of Bayonne
- 6 PVSC Water Pollution Control Facility (Newark)

# Bayonne's sewer system

- Oak Street Pumping Station pumps flows to the Passaic Valley Sewerage Commission by a force main
- Total system capacity is 17.6 MGD; average daily dry weather flow 8.3 MGD
- Capacity to pump 40MGD during wet weather events caused by combined sewers



① City of Bayonne  
 ② PVSC Water Pollution Control Facility (Newark)

# GIS Map of Water System

Bayonne Aqueduct View

1 inch = 2,300 feet

- Legend - Water Mains**
- wPressuredMain
- DIAMETER, SubtypeCode
- 2 inch, Distribution
  - 3 inch, Distribution
  - 4 inch, Distribution
  - 6 inch, Distribution
  - 8 inch, Distribution
  - 12 inch, Distribution
  - 18 inch, Distribution
  - 24 inch, Distribution
  - 36 inch, Transmission
  - 48 inch, Transmission



Scale: 1" = 2,300'

United Water Bayonne  
Water Distribution System



Page

1 inch = 950 feet

# GIS Map of Sewer System

**Legend - Sewer Mains**

- 14 inch
- 18 inch
- 24 inch
- 30 inch
- 36 inch
- 42 inch
- 48 inch
- 54 inch
- 60 inch
- 66 inch
- 72 inch
- 78 inch
- 84 inch
- 90 inch
- 96 inch
- 102 inch
- 108 inch
- 114 inch
- 120 inch
- 126 inch
- 132 inch
- 138 inch
- 144 inch
- 150 inch
- 156 inch
- 162 inch
- 168 inch
- 174 inch
- 180 inch
- 186 inch
- 192 inch
- 198 inch
- 204 inch
- 210 inch
- 216 inch
- 222 inch
- 228 inch
- 234 inch
- 240 inch
- 246 inch
- 252 inch
- 258 inch
- 264 inch
- 270 inch
- 276 inch
- 282 inch
- 288 inch
- 294 inch
- 300 inch
- 306 inch
- 312 inch
- 318 inch
- 324 inch
- 330 inch
- 336 inch
- 342 inch
- 348 inch
- 354 inch
- 360 inch
- 366 inch
- 372 inch
- 378 inch
- 384 inch
- 390 inch
- 396 inch
- 402 inch
- 408 inch
- 414 inch
- 420 inch
- 426 inch
- 432 inch
- 438 inch
- 444 inch
- 450 inch
- 456 inch
- 462 inch
- 468 inch
- 474 inch
- 480 inch
- 486 inch
- 492 inch
- 498 inch
- 504 inch
- 510 inch
- 516 inch
- 522 inch
- 528 inch
- 534 inch
- 540 inch
- 546 inch
- 552 inch
- 558 inch
- 564 inch
- 570 inch
- 576 inch
- 582 inch
- 588 inch
- 594 inch
- 600 inch
- 606 inch
- 612 inch
- 618 inch
- 624 inch
- 630 inch
- 636 inch
- 642 inch
- 648 inch
- 654 inch
- 660 inch
- 666 inch
- 672 inch
- 678 inch
- 684 inch
- 690 inch
- 696 inch
- 702 inch
- 708 inch
- 714 inch
- 720 inch
- 726 inch
- 732 inch
- 738 inch
- 744 inch
- 750 inch
- 756 inch
- 762 inch
- 768 inch
- 774 inch
- 780 inch
- 786 inch
- 792 inch
- 798 inch
- 804 inch
- 810 inch
- 816 inch
- 822 inch
- 828 inch
- 834 inch
- 840 inch
- 846 inch
- 852 inch
- 858 inch
- 864 inch
- 870 inch
- 876 inch
- 882 inch
- 888 inch
- 894 inch
- 900 inch
- 906 inch
- 912 inch
- 918 inch
- 924 inch
- 930 inch
- 936 inch
- 942 inch
- 948 inch
- 954 inch
- 960 inch
- 966 inch
- 972 inch
- 978 inch
- 984 inch
- 990 inch
- 996 inch
- 1002 inch
- 1008 inch
- 1014 inch
- 1020 inch
- 1026 inch
- 1032 inch
- 1038 inch
- 1044 inch
- 1050 inch
- 1056 inch
- 1062 inch
- 1068 inch
- 1074 inch
- 1080 inch
- 1086 inch
- 1092 inch
- 1098 inch
- 1104 inch
- 1110 inch
- 1116 inch
- 1122 inch
- 1128 inch
- 1134 inch
- 1140 inch
- 1146 inch
- 1152 inch
- 1158 inch
- 1164 inch
- 1170 inch
- 1176 inch
- 1182 inch
- 1188 inch
- 1194 inch
- 1200 inch
- 1206 inch
- 1212 inch
- 1218 inch
- 1224 inch
- 1230 inch
- 1236 inch
- 1242 inch
- 1248 inch
- 1254 inch
- 1260 inch
- 1266 inch
- 1272 inch
- 1278 inch
- 1284 inch
- 1290 inch
- 1296 inch
- 1302 inch
- 1308 inch
- 1314 inch
- 1320 inch
- 1326 inch
- 1332 inch
- 1338 inch
- 1344 inch
- 1350 inch
- 1356 inch
- 1362 inch
- 1368 inch
- 1374 inch
- 1380 inch
- 1386 inch
- 1392 inch
- 1398 inch
- 1404 inch
- 1410 inch
- 1416 inch
- 1422 inch
- 1428 inch
- 1434 inch
- 1440 inch
- 1446 inch
- 1452 inch
- 1458 inch
- 1464 inch
- 1470 inch
- 1476 inch
- 1482 inch
- 1488 inch
- 1494 inch
- 1500 inch
- 1506 inch
- 1512 inch
- 1518 inch
- 1524 inch
- 1530 inch
- 1536 inch
- 1542 inch
- 1548 inch
- 1554 inch
- 1560 inch
- 1566 inch
- 1572 inch
- 1578 inch
- 1584 inch
- 1590 inch
- 1596 inch
- 1602 inch
- 1608 inch
- 1614 inch
- 1620 inch
- 1626 inch
- 1632 inch
- 1638 inch
- 1644 inch
- 1650 inch
- 1656 inch
- 1662 inch
- 1668 inch
- 1674 inch
- 1680 inch
- 1686 inch
- 1692 inch
- 1698 inch
- 1704 inch
- 1710 inch
- 1716 inch
- 1722 inch
- 1728 inch
- 1734 inch
- 1740 inch
- 1746 inch
- 1752 inch
- 1758 inch
- 1764 inch
- 1770 inch
- 1776 inch
- 1782 inch
- 1788 inch
- 1794 inch
- 1800 inch
- 1806 inch
- 1812 inch
- 1818 inch
- 1824 inch
- 1830 inch
- 1836 inch
- 1842 inch
- 1848 inch
- 1854 inch
- 1860 inch
- 1866 inch
- 1872 inch
- 1878 inch
- 1884 inch
- 1890 inch
- 1896 inch
- 1902 inch
- 1908 inch
- 1914 inch
- 1920 inch
- 1926 inch
- 1932 inch
- 1938 inch
- 1944 inch
- 1950 inch
- 1956 inch
- 1962 inch
- 1968 inch
- 1974 inch
- 1980 inch
- 1986 inch
- 1992 inch
- 1998 inch
- 2004 inch
- 2010 inch
- 2016 inch
- 2022 inch
- 2028 inch
- 2034 inch
- 2040 inch
- 2046 inch
- 2052 inch
- 2058 inch
- 2064 inch
- 2070 inch
- 2076 inch
- 2082 inch
- 2088 inch
- 2094 inch
- 2100 inch
- 2106 inch
- 2112 inch
- 2118 inch
- 2124 inch
- 2130 inch
- 2136 inch
- 2142 inch
- 2148 inch
- 2154 inch
- 2160 inch
- 2166 inch
- 2172 inch
- 2178 inch
- 2184 inch
- 2190 inch
- 2196 inch
- 2202 inch
- 2208 inch
- 2214 inch
- 2220 inch
- 2226 inch
- 2232 inch
- 2238 inch
- 2244 inch
- 2250 inch
- 2256 inch
- 2262 inch
- 2268 inch
- 2274 inch
- 2280 inch
- 2286 inch
- 2292 inch
- 2298 inch
- 2304 inch
- 2310 inch
- 2316 inch
- 2322 inch
- 2328 inch
- 2334 inch
- 2340 inch
- 2346 inch
- 2352 inch
- 2358 inch
- 2364 inch
- 2370 inch
- 2376 inch
- 2382 inch
- 2388 inch
- 2394 inch
- 2400 inch
- 2406 inch
- 2412 inch
- 2418 inch
- 2424 inch
- 2430 inch
- 2436 inch
- 2442 inch
- 2448 inch
- 2454 inch
- 2460 inch
- 2466 inch
- 2472 inch
- 2478 inch
- 2484 inch
- 2490 inch
- 2496 inch
- 2502 inch
- 2508 inch
- 2514 inch
- 2520 inch
- 2526 inch
- 2532 inch
- 2538 inch
- 2544 inch
- 2550 inch
- 2556 inch
- 2562 inch
- 2568 inch
- 2574 inch
- 2580 inch
- 2586 inch
- 2592 inch
- 2598 inch
- 2604 inch
- 2610 inch
- 2616 inch
- 2622 inch
- 2628 inch
- 2634 inch
- 2640 inch
- 2646 inch
- 2652 inch
- 2658 inch
- 2664 inch
- 2670 inch
- 2676 inch
- 2682 inch
- 2688 inch
- 2694 inch
- 2700 inch
- 2706 inch
- 2712 inch
- 2718 inch
- 2724 inch
- 2730 inch
- 2736 inch
- 2742 inch
- 2748 inch
- 2754 inch
- 2760 inch
- 2766 inch
- 2772 inch
- 2778 inch
- 2784 inch
- 2790 inch
- 2796 inch
- 2802 inch
- 2808 inch
- 2814 inch
- 2820 inch
- 2826 inch
- 2832 inch
- 2838 inch
- 2844 inch
- 2850 inch
- 2856 inch
- 2862 inch
- 2868 inch
- 2874 inch
- 2880 inch
- 2886 inch
- 2892 inch
- 2898 inch
- 2904 inch
- 2910 inch
- 2916 inch
- 2922 inch
- 2928 inch
- 2934 inch
- 2940 inch
- 2946 inch
- 2952 inch
- 2958 inch
- 2964 inch
- 2970 inch
- 2976 inch
- 2982 inch
- 2988 inch
- 2994 inch
- 3000 inch



Scale: 1" = 1,000'

United Water Bayonne  
Sewer System



Page

1 inch = 1,000 feet

# Concession Agreement – Risk Allocation



## Revenue

<b>Underperformance of Revenue</b>	<ul style="list-style-type: none"><li>▪ No volume risk due to contracted Revenue Requirement set out for the term of the Concession Agreement</li><li>▪ A rate adjustment mechanism will be applied to ensure the defined Revenue Requirement is maintained</li><li>▪ Such rate adjustments will occur annually and will be bi-directional</li><li>▪ Issuer is not dependent upon regulatory approval for rate base adjustments typical of a regulated utility</li></ul>
<b>Rate Increases to Unsustainable Levels</b>	<ul style="list-style-type: none"><li>▪ Water rates are comparable to other municipalities and sewer rates are considerably lower</li><li>▪ Rate growth stipulated in the Concession Agreement is below the historical rate growth in NJ</li></ul>
<b>Usage Risk</b>	<ul style="list-style-type: none"><li>▪ Customer growth in New Jersey has grown steadily over the past 40 years and are expected to show even higher levels of growth in Bayonne from various developments in the region</li><li>▪ In the event that usage actually decreases, there are contractually protected rate adjustments to ensure payment to the Concessionaire according to the Revenue Requirement</li></ul>
<b>Counterparty Risk</b>	<ul style="list-style-type: none"><li>▪ 93% of customers are residential and spread over 11,000+ accounts, limiting counterparty risk</li><li>▪ Residents of Bayonne are relatively affluent, with a median household income 12% greater than the national average</li></ul>
<b>Collections Risk</b>	<ul style="list-style-type: none"><li>▪ Collections are expected to increase from the installation of the new metering system</li><li>▪ Secured by the BMUA's obligation to remit proceeds of annual lien sales for unpaid bills</li></ul>
<b>Supply Risk</b>	<ul style="list-style-type: none"><li>▪ Quantity and quality of water supply is guaranteed by the Authority</li></ul>
<b>Inflation</b>	<ul style="list-style-type: none"><li>▪ 30% of revenue is inflation linked which provides alignment between revenues and costs</li></ul>



# Concession Agreement – Risk Allocation

## Costs

<b>Capex Increases</b>	<ul style="list-style-type: none"> <li>▪ United assumes the risk of increased costs of the Base Capex program</li> <li>▪ Any divergence in ongoing capex from the agreed upon threshold results in a true up in the following year</li> </ul>
<b>Opex Increases</b>	<ul style="list-style-type: none"> <li>▪ Costs are either pass-through to rate payers, covered by United under a fixed price contract, fixed amount as per the Concession Agreement or represent relatively small overhead and administrative costs</li> </ul>
<b>O&amp;M Contract Terminated</b>	<ul style="list-style-type: none"> <li>▪ Large supply of companies with the financial strength and operational expertise to manage the System</li> <li>▪ Robust replacement and operating cost sensitivities</li> </ul>
<b>Liquidity Issues</b>	<ul style="list-style-type: none"> <li>▪ “Safety valves” kick in if pass-through costs or volumes are below certain levels during the rate freeze period</li> <li>▪ Availability of a \$10.0 million revolving credit facility, a \$6.5 million rate stabilization payment amount, and \$5.0mm of cash on the balance sheet will mitigate any short term liquidity risk</li> </ul>

## Contractual

<b>Concessionaire / BMUA Default</b>	<ul style="list-style-type: none"> <li>▪ Significant termination compensation available in the event of a Concessionaire or Authority default</li> <li>▪ In both cases the termination payment must be at least the debt, accrued interest and make-whole</li> <li>▪ BMUA has no significant payment obligations as revenue shortfalls are passed through to rate payers under the rate adjustment mechanism</li> <li>▪ Termination payment would be funded by proceeds of a re-concession or a BMUA debt issuance</li> <li>▪ A Deficiency Agreement between the City of Bayonne and the BMUA will be maintained throughout the life of the Concession which will allow the BMUA to issue bonds back by the City to pay termination payments</li> </ul>
--------------------------------------	---

## Other

<b>Pension and Labour</b>	<ul style="list-style-type: none"> <li>▪ No material pension or labor liabilities</li> </ul>
<b>Environmental</b>	<ul style="list-style-type: none"> <li>▪ United operates 100+ systems under contract and also owns and operates utilities in 8 states</li> <li>▪ United has never had a contract terminated because of an environmental concern</li> </ul>



# United Water's SOLUTION<sup>SM</sup> is gaining recognition

Received New Jersey Alliance for Action Distinguished Engineering Award, May 2013

Voted by peers as 'Partnership of the Year' at the American Water Summit 2012 for having delivered **"the most dramatic improvement in service and customer value in the three most recent years"**

Featured at the 2012 Clinton Global Initiative as an **"innovative partnership which meets one of the world's most pressing challenges"**

