



***Financing Water Infrastructure through Public Private Partnerships***

***Finding the Right Model***

**Water Salon Series – Part V**

**Summary and Synthesis**

**April 30, 2012**

**Washington, DC**

**Purpose and Overview**

The Horinko Group’s (THG) Water Division convened the first installment of its 2012 Executive Salon Series to explore proven and conceptual public-private partnership (P3) models to finance the massive overhaul awaiting our nation’s aging water infrastructure.<sup>1</sup>

As challenges facing the water sector continue to grow, the need for new and innovative models for funding water infrastructure, maintenance, and operational readiness are critical. Model components that have been effective within other sectors facing similar investment gaps (e.g., transportation sector), and a growing list of replicable P3 success stories within the water sector itself, may provide the foundation and roadmap for more innovative approaches to take hold.

Through its Executive Salon process, THG convened forward-thinking individuals and organizations with an in-depth understanding of the underlying challenges preventing the infusion of much needed public and private capital to begin addressing the water infrastructure backlog<sup>2</sup>. If the water sector is to move towards a sustainable model of financing the recapitalization of aging infrastructure, a well-structured and effectively communicated form of P3 will be necessary to carry out its continued growth.

While the group agreed that a candid discussion identifying the barriers to pursuing such models and examining root causes must take place, this dialogue would focus on the opportunities that exist for practical, leveraged solutions.

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<sup>1</sup> See Appendix B: *April 30, 2012 Salon Overview & Agenda*; The Horinko Group

<sup>2</sup> See Appendix C: *April 30, 2012 Salon Participant List*; The Horinko Group

## **Welcome and Introductions**

*Brendan McGinnis, Water Division Director, The Horinko Group*

In his welcoming remarks to participants, Brendan McGinnis provided an overview of how The Horinko Group arrived at this fifth installment in its Executive Salon Series – a topic conceptualized following a panel hosted at the company’s October 2011 Annual Summit, entitled, *The Business of Water*.<sup>3</sup>

The 90-minute panel in the Fall of 2011 permitted just enough time to scratch the surface, identifying and describing a number of complex attributes warranting a greater deal of attention, including project capitalization strategies, privatization options, full-cost pricing, and the role advanced water technologies will play. In response to requests from Summit participants and partner organizations to continue this dialogue, THG constructed the day’s agenda and targeted a diverse line up of public-private thought leaders to consider a more effective model, or mix of models, to bridge the water infrastructure investment gap.

## **Overview of Agenda and Discussion Parameters**

*G. Tracy Mehan III, Principal, The Cadmus Group*

Following participant introductions, salon moderator, Tracy Mehan, framed the discussion by noting the existence and role of a number of efforts underway to deliver additional financial capital into the water sector, ranging from proposals calling for increased government assistance, increased capital in private activity bonds, creation of infrastructure banks, introduction of private sector incentives, continued and expanded state revolving fund (SRF) programs, establishment of a water trust, and formation of a Water Infrastructure Finance Innovation Authority (WIFIA), to name a few.

While each of these efforts is important and legitimate, this salon was intended, initially, to focus on means for attracting private capital to the water sector by way of “pure” P3 model(s), absent complete government assistance or subsidy programs. Additionally, this dialogue sought to examine not only traditional drinking water and wastewater infrastructure needs and concerns, but also other forms of water infrastructure, such as ports, waterways, inland levees, advanced technologies, etc.

## **Review of Water Sector P3 Models**

*Brent Fewell, Vice President of Environmental Compliance, United Water*

As Keynote Speaker, Brent Fewell, Vice President of Environmental Compliance at United Water, provided a brief history and overview of P3 models commonly found within the water sector. Representing the second largest private water company in the country, he works closely with municipally and privately owned drinking water and wastewater facilities to address their environmental compliance issues. Doing so, he has encountered a growing number of aging and failing municipal systems, resulting in an increased risk to public health and enforcement issues for utilities.<sup>4</sup>

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<sup>3</sup> See Appendix A: The Horinko Group’s *Second Annual Water Summit Proceedings*; October 25, 2011; University of Maryland at College Park

<sup>4</sup> See Appendix A: Mr. Fewell’s Keynote Presentation PowerPoint

Mr. Fewell began by providing the following definition of a P3, as recognized by the National Council for Public-Private Partnership’s (NCP3P) –

*“A contractual agreement between a public agency (federal, state or local) and a private sector entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public. In addition to the sharing of resources, each party shares in the risks and rewards potential in the delivery of the service and/or facility.”<sup>5</sup>*

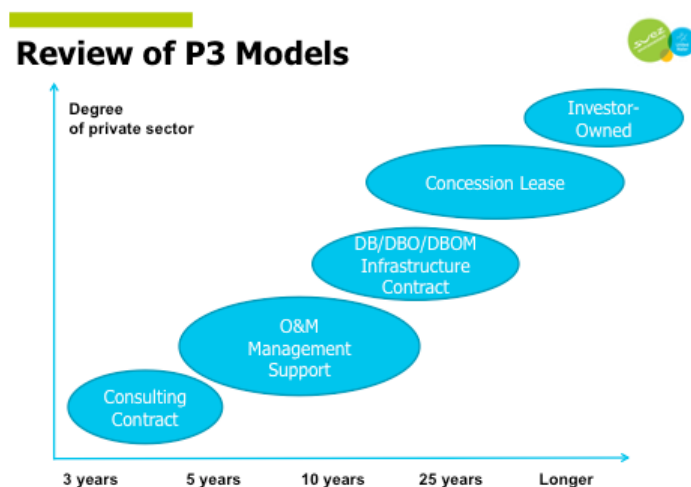
He emphasized that privatization qualifies as a true P3 model, since owning and operating a water system necessitates a continued close partnership between the private entity and the community.

Two elements of NCP3P’s definition that he believes are of particular importance:

- 1) Keep the focus of the partnership on the public’s best interest, ensuring services provided are cost effective and reliable; and,
- 2) Shared risk and reward is the foundation of making such arrangements work – there must be the potential for the private company making a large infrastructure investment to share in rewards tied to the partnership. Without the potential for sharing in the rewards, no investment would occur.

As displayed in the graphic, Mr. Fewell categorized the range of P3 models found within the water sectors as follows:

- Consulting Contract
- Operations and Maintenance Management Support
- Design-Build/Design-Build-Operate/Design-Build-Operate-Maintain Infrastructure Contracts
- Concession Lease
- Investor-Owned



The most common P3 models found within the water sector are *Investor-Owned*, indicating that the private entity owns and operates the water system; and *Operations and Maintenance (O&M) Management and Support* model, whereby the community hires the private entity for a period of time to operate and maintain the water system. Due to the often-short duration of the O&M contract and the transactional, rather than strategic, nature of the agreement between the community and

<sup>5</sup> See Appendix A: P3 Basics at National Council for Public-Private Partnerships

private entity, long-term efficiencies and infrastructure improvements are traded for near-term issue resolution. Examples of O&M models where the private entity and community are effectively working in tandem include Milwaukee, Buffalo, and Indianapolis.

Due to the resistance of communities towards full-scale privatization of water systems (Investor-Owned), and the difficulty of the private entity to finance aging infrastructure through the O&M model, many forecast an increase in the *Concession Lease* model. This model, fairly new within the water sector of the United States, spreads the cost of infrastructure replacement and maintenance over the life of the asset, often through a long-term (20 year plus) lease. The longevity of the lease provides the private entity with an acceptable rate of risk and return, necessary for making a large upfront capital investment. This model requires certainty of rate recovery for the private entity, making the drafting of contractual agreements and the components of those agreements critical. This model is not uncommon in the transportation sector, successfully implemented within a number of states (e.g., Virginia “Hot Lanes,” Indiana Toll Roads).

Mr. Fewell went on to introduce seven keys to successful P3 projects as identified by the NCPPP. He emphasized the importance of clearly defined expectations and contractual provisions, as well as ongoing communication with the local communities.

In the European Union, the use of P3 models within the water sector is relatively common. For example, approximately 85% of water and wastewater services are private provisions in France and nearly 100% in the United Kingdom.

Even though similar types of P3s are less common within the United States, a high degree of satisfaction has been realized amongst those participating, confirmed by a 93% annual renewal. In the case where the investor-owned utility does not meet the public’s expectation, the Public Utility Commission (PUC) serves as a safety net to ensure the provision of safe, reliable utility service and infrastructure at reasonable rates. Any private company that owns or operates a utility is regulated by the PUC and all requests for rate increases for infrastructure or service improvements are subject to PUC approval.

The experience and success of P3 models in the U.S. for helping to close America’s infrastructure gap continues to mature.<sup>6</sup> Taking a closer look at general P3 success stories to date, a variety of examples exist at the state level. Currently, 31 states have enabling legislation encouraging the utilization of P3s to address infrastructure concerns. Although much of this legislation is designed to support transportation projects, an increasing number of states are looking to include water infrastructure. One such example can be found in Maryland, where a P3 bill is being circulated that would allow for water infrastructure projects.

Other factors driving the adoption of P3s within the water sector are the desire of many communities, particularly those operating smaller systems, to exit the business of providing and treating water due to an aging and retiring workforce, increased complexity in regulations, and

### Seven Keys to Successful P3



1. Public Sector Champion
2. Statutory Environment
3. Public Sector’s Organized Structure
4. Detailed Contract (Business Plan)
5. Clearly Defined Revenue Stream
6. Stakeholder Support
7. Pick Your Partner Carefully

<sup>6</sup> See Appendix A: *Closing America’s Infrastructure Gap: The Role of Public-Private Partnerships*; Deloitte Research Study; 2007

the additional enforcement associated with those regulations. Meanwhile, communities are looking for greater operational expertise, technological innovations, and improved financial and technical performance.

Furthermore, as the national debt continues to grow and public funds are stretched increasingly thin, local communities are particularly impacted. Water systems, competing for limited dollars from an ever-shrinking pot of state and federal funds, continue to delay much needed maintenance and improvements. These communities also suffer from an inability to access traditional financing, such as municipal bonds, viewed as increasingly risky by investors fearful of default. These issues are leading communities, rural and urban alike, to seek private equity as a means to address their fiscal woes and refinance their debt.

Mr. Fewell concluded by acknowledging that the traditionally stable revenue generation found within the water sector is attracting interest from a new class of private equity investors, including pension-based funds. As fund managers review a water utility's cash flows, they see that it is a stable asset with a long life, particularly when compared to stocks and bonds. This provides the investor with consistent, moderate returns over an extended period. While there has been limited investment to date, the appetite for infrastructure investment is increasing. On paper, it is the optimal form of long-term asset that could effectively align with the liability characteristics of a pension fund. This concept holds great promise and warrants further exploration.<sup>7</sup>

### **Facilitated Discussion**

Before initiating the facilitated discussion, moderator Tracy Mehan highlighted a few generally agreed upon assumptions pertaining to P3s, in order to encourage participants to look beyond the challenges that exist and focus instead on solutions. Stipulations included agreeing that the current political environment within the water sector and the political will to seek solutions outside of the current status quo will continue to be an underlying challenge to pursuing P3s. The definition of politics was noted to be distinct from political will, defined as leadership and qualities associated with leadership. Furthermore, aging workforce and retirement issues were agreed to be interrelated and needing resolution, but was not a focus of the day's discussion.

The following predetermined questions provided to the participants were designed to help guide the discussion –

- 1) *Are there effective P3 financing models, or replicable components, that exist within other sectors (e.g. transportation) that could be applied to the water sector? What are critical inputs and outputs?*
- 2) *What public-private entities must be at the table to ensure a workable, sustainable financing model? What role/function would each serve?*
- 3) *Specifically, what would an all-encompassing P3 water-financing model look like in an ideal world? How would it be structured?*
- 4) *Building on the previous question, what benefits would such a model provide to the financier, service provider, ratepayer, and taxpayer? What challenges/barriers exist to realizing such a model? What near-term opportunities exist for advancing such a model?*

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<sup>7</sup> See Appendix A: *Pension Funds Investment in Infrastructure*; OECD Survey; September 2011

## **P3 Models – Characteristics and Examples**

Since P3 success stories within the water sector are less prevalent, participants identified other sectors, primarily transportation, where P3 financing models have proven effective, and discussed how the foundational elements of such models could be replicated and applied to the water sector.

### Overview of Transportation P3s

As featured within the Wall Street Journal article, *Where the Money Is (Hint: It Isn't the Government)*, on May 23, 2011, author Richard Gettis, associate professor in the Department of Policy Analysis and Management at Cornell University explains,

*“...the role of private capital in US Transportation is growing again. Private financing for transportation infrastructure projects, which totaled \$10.2 billion from 1993-2007, has jumped to \$14.2 billion from 2008 to the present. Experts believe as much as \$400 billion is available world-wide from pension and mutual funds, insurance companies and other investment groups that like the stable, inflation-linked cash flows transportation projects generate.”*

Taking a closer look at the United State's transportation sector, P3 models are sorted into two categories based on the environment in which they operate – private and not-for-profit. P3 transactions can range from 0-100% private equity, but with a sub-debt contribution, this structure is used in so-called not-for-profit P3 models, where private equity is unable to participate in order to preserve the tax-exempt nature of the structure.<sup>8</sup>

Early P3 models in the transportation sector were primarily found in the not-for-profit arena. Unless there are changes in the tax code, such models will continue to be attractive as interest rates ultimately begin moving upward.

Private sector P3s operating in a for-profit environment are often established based on debt structure. Equity provides cover for senior debt, but if required to cover all senior debt, the transaction cost is driven up. In the transportation sector, programs like the Transportation Infrastructure Financing Innovations Authority (TIFIA) provide cost advantage, sub-debt structures that lower the effective weighted average capital cost of a transaction.

### Concession Lease Model, In Practice

In practice, the Concession Lease model within the water sector could be applied to facilities seeking upgrades that would partner with the private company to operate and manage (O&M) the facility for the period of the lease. To do so, project deliverables would need to be identified (i.e. segment of the system requiring the upgrade), performance metrics established, and the underlying rate base associated with that improvement would need to be established, creating an equity interest from the private sector in financing the upgrade or expansion of an existing facility. While the facility remains publically owned, the Concession Lease creates the proper

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<sup>8</sup> See Appendix A: Prieto, *Perspectives on Public Private Partnerships*, page 8, American Bar Association, January 2009

arrangement for upgrades or expansions to be privately financed.<sup>9</sup>

From the perspective of a private O&M company and equity investment partner entering into the Concession Lease, accountability and performance-based incentives could be established to improve operational efficiency, tied to the transfer of risk and shared-risk characteristics of the arrangement. It is worth noting that the rate and investment would not only be applied to the initial upgrade, but also for ongoing operation and maintenance, based upon the agreed metrics. With respect to consent decrees, the timing of deliverables and project completion may have to be expedited; alternatively, a request to re-open the consent decree may allow for greater flexibility in achieving the compliance schedules and adoption of innovative approaches, including green technologies to improve energy and water efficiencies.

#### Renowned P3 Model – Santa Paula Wastewater Plant

The Santa Paula Wastewater Plant in Southern California is an efficient procurement model that is performance-based, rather than prescriptive, and employs a model contract with appropriate allocation of risk. This project operated under a consent decree with a tight timeline facing regulatory fines. The public entity sought to transfer operational and financial risk to a private entity that had access to a large pool of funding and the ability to invest capital efficiently.

California has enabling legislation for P3s in the wastewater sector, so a private company was able to build a new facility on an adjacent site, effectively replacing the failing plant. The project company entered into a Design-Build-Operate-Finance (DBOF) agreement over a 30-year concession with the city of Santa Paula. The project was 100% privately financed, based on a life cycle cost analysis of running the plant for 30 years. The 30-year rate sheet was transparent and easy to comprehend, as it was summarized on one-page.<sup>10</sup> The project received international recognition when it was awarded the “Water Deal of the Year.”<sup>11</sup>

#### P3s Abroad – The Canadian Model

Participants noted that European and Canadian P3 models have a number of foundational elements that could be replicated within the United States. The Canadian market in particular is replete with P3s throughout its infrastructure, including public facilities, transportation, and water.

The Canadian model is quite different from those found within the United States, notwithstanding the concession model, as they are performance-based and operate on blended finance, typically one-third private, one-third public, one-third ratepayer. “Value of money” assessments are used to justify the P3 approach as more cost effective than traditional infrastructure financing over the life of the contract, and include a shared allocation of risk between public and private partner. By doing so, the private sector demonstrates performance, but is not permitted a return on their investment until the objectives outlined within the contract are met (i.e. demonstrate quality of service, efficiency costs, and delivery). The private company competes for the DBO contract, then competes for the cost of the capital, so there is a significant amount of capital still provided by the public (city, utility, province, or sometimes

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<sup>9</sup> See Appendix A: *Will Nassau County Break the Mold for PPPs in the U.S. Water Sector?* American Water Intelligence; June 8, 2012

<sup>10</sup> See Appendix A: Dornbirer, *A Review of Innovative Financing Approaches for Community Water Projects*, Testimony before Subcommittee on Water Resources and Environment, Committee on Transportation and Infrastructure, U.S. House of Representatives

<sup>11</sup> See Appendix A: PERC Water – Santa Paula Wastewater Plant Case Study

federal government).<sup>12</sup>

An important differentiating factor allowing such a model to be workable is that the laws and methods in which these P3s operate are less restrictive, resulting in tailored solutions based on the partner's needs, whereas in the United States, P3 legislation is more prescriptive, varying state by state. These contracting and permitting differences between each state are burdensome, inflexible, and prevent innovation.

British Columbia (BC) is recognized as considerably advanced amongst the Canadian provinces and introduced supportive P3 legislation, amended under the Municipal Act, in 1998. BC also established Partnership BC, a corporation wholly owned by the BC government, to consult the public sector on implementing P3s. Infrastructure Ontario is a similar government entity using a supportive model to evaluate and implement P3s.<sup>13</sup>

### Role of Advanced Technologies

When considering P3 models, it is important to also explore true alternatives to the existing water and wastewater programs and practices, rather than pursue only models that act as extensions and modifications of the current utility. For example, advanced or disruptive technologies and techniques will continue to occupy a greater role in addressing our nation's water infrastructure goals.

Today's utilities need to be aware of alternative, off-grid options that are available, and water financiers need to account for them as well. However, in order to make use of these alternatives, the water sector needs to revisit some of the current financing models that are not designed to support these techniques and technologies. If such methods and technologies can help to replace or consolidate unnecessary and expensive aging infrastructure, then they should be built into any new and developing P3 models.

### **P3 Models – Financing Concepts and Tools**

The following describes a range of concepts and tools tied to P3 usage that may serve as drivers toward bridging the funding gap facing our nation's water infrastructure.

#### Water Infrastructure Financing Innovations Authority (WIFIA)

The Transportation Infrastructure Financing and Innovation Act (TIFIA) program provides Federal credit assistance in the form of direct loans, loan guarantees, and standby lines of credit to finance surface transportation projects of national and regional significance.<sup>14</sup>

A similar program that has been proposed for the water sector is referred to as the Water Infrastructure Financing Innovations Authority<sup>15</sup> (WIFIA), drafted with input from the American Water Works Association (AWWA), Water Environment Federation (WEF) and the

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<sup>12</sup> See Appendix A: Davis, An Introduction to Public Private Partnerships in Canada; Presentation delivered to the 2011 Canada-Taiwan Public Infrastructure Exchange Forum in Taipei, Taiwan; March 28, 2011

<sup>13</sup> See Appendix A: U.S. EPA, EFAB Report, *Public-Private Partnerships in the Provision of Water and Wastewater Services: The Canadian Experience*, September 2008

<sup>14</sup> See Appendix A: U.S. Department of Transportation Federal Highway Administration website

<sup>15</sup> See Appendix A: *A Cost Effective Approach to Increasing Investment in Water Infrastructure: Water Infrastructure Financing Innovations Authority*



Association of Metropolitan Water Agencies (AMWA). It was noted that WIFIA is not an obstacle to P3s, but rather a tool that can enable and support P3 projects.

A differentiating factor between TIFIA and WIFIA that the participants noted was that TIFIA loans include a “springing lien” that triggers in the event of a default or liquidation (bankruptcy equivalent), allowing the government to have parity with other lenders. This lien is a source of continued debate and controversy within the transportation sector, as individuals and organizations continue to advocate for its removal. WIFIA as it is currently proposed does not include the springing lien provision, and such a provision has not been discussed.

Furthermore, there was concern that WIFIA is intended mainly for large-scale water infrastructure projects, while our nation’s smaller, rural systems that are in despair will be overlooked. It was suggested that financing programs like WIFIA should consider bundling group projects (possibly by way of region or watershed) to assist the needs of smaller communities. By doing so, there will be a larger number of utilities that may take advantage of the low-cost financing, while the risk will be spread over a greater base.

Until there is greater confidence in the market, such programs as TIFIA and proposed WIFIA can serve as enablers to success, providing a public policy tool enabling more efficient delivery of the asset.

#### Water Infrastructure Investment Fund

The creation of a water infrastructure investment fund capitalized by U.S. public pension plans was discussed as an attractive private equity source for public water municipalities by way of a P3 model.

A partnering opportunity would exist to provide municipalities with access to large pools of private capital through pension-based funds. By doing so, the need of a municipality for a long-term investment in critical water infrastructure would be coupled with pension-based funds seeking investments that are stable and have long-term returns for its beneficiaries. This model effectively matches the long-term liabilities of a pension plan with the long-term return characteristics of a P3 model.<sup>16</sup>

#### “Quasi-Publicly” Owned Treatment Works

For the purpose of providing federal financial assistance, either directly as a federal categorical grant or indirectly in the form of a capitalization grant, EPA has interpreted the definition of Publicly Owned Treatment Works (POTW), under Section 212 of the Clean Water Act (CWA), as requiring 100% public ownership. Although, Section 212(2)(A) refers back to Section 201, wherein assistance to privately owned treatment works is limited, this interpretation should be re-evaluated in light of new special purpose vehicles used under P3 models and whose primary purpose is to benefit the public.

If a POTW could be less than 100% publicly owned, there would become the possibility for a P3 model with split ownership. The private partner would be co-permitted and Clean Water State

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<sup>16</sup> See Appendix A: Wilson, *A Review of Innovative Financing Approaches for Community Water Projects*, Testimony before Subcommittee on Water Resources and Environment, Committee on Transportation and Infrastructure, U.S. House of Representatives

Revolving Fund (CWSRF) assistance could be made available to fund the public share of eligible capital projects. It needs to be determined if split ownership would make economic sense, but the CWSRF could be allowed to finance privately-owned, public purpose treatment works to support P3s.

### Mayors' Water Council

The U.S. Conference of Mayors has established the Mayors' Water Council, a water committee that is open to exploring P3s. Indianapolis leads this effort, operating a public trust (subject to state and PUC regulations) to help finance their water infrastructure.

### Special Experimental Programs

In the past, legislation has created Special Experimental Programs (SEPs) that gave the Secretary of Transportation the ability to conduct activities outside of the specific rules within a limited scope (generally for research and demonstration purposes). Two of these SEPs pushed the P3 market from a federal enablement site. These SEPs could be used for water infrastructure projects.

### Innovative Financing: Water Usage and Fuel Extraction

With the development of new fuel recovery techniques for unconventional oil and gas, there exists opportunities for innovative water financing. As practices like hydraulic fracturing require vast amounts of water, and the return on a gallon of fossil fuel is much higher than the return on a gallon of water, tying the fuel recovery activities to water use and infrastructure needs has huge potential for new financing structures.

### Insurance

Water infrastructure facilities are long-lived assets, and therefore, financing structures, including refinancing risk and sub-debt tenor, can be complex challenges to address upfront. Even though the refinancing risks are great, there has yet to be an example of a major default or liquidation. An insurance tool to help account for upfront risk would lessen the initial financial hurdle and related uncertainty facing potential equity investors.

### Lifecycle Concerns

When a P3 contract is signed, there are specific provisions and definitions (such as state of good repair, replacement systems, performance levels, and objectives) that all have to be funded out of the revenue stream generated by that project. If the same project were funded through the public sector, revenue generated would only account for 60-80% of the total cost of the project. Considering this, both models need to determine how to address lifecycle concerns.

### **Critical P3 Players**

Political leadership (particularly at the local level), governing boards, and the general public were cited as critical players in the execution of any P3 model within the water sector. The question was posed as to which non-traditional, less obvious parties need to be engaged as well. The following is a summary of those individuals and organizations identified by participants –

- Participants noted that the water sector could look to P3 success stories within the transportation sector for inspiration and lessons learned regarding such important entities, which would include bond lawyers, government accounting officers, state attorney generals, major pension investors (particularly in the municipal bond market), and private equity investors. These parties provide unique insight and oftentimes champion workable alternatives to proposed solutions.
- City managers and treatment managers should also be engaged as they actively monitor municipal water systems on a daily basis. It is those on the ground who are most aware of the decay and lack of funding for the needs of their systems. They can help provide political will and perspective when advocating for improvements.
- State Attorneys General and the U.S. Department of Justice are two key public entities, as each deal directly with the negotiation of consent decrees and their enforcement.
- Labor is another non-traditional party that many within the water sector do not always engage early on. When labor groups are engaged early in the process, they are generally supportive of P3 models. There is some variance between craft and operating labor and the transportation and water sectors, but support generally exists when there are adequate buyout programs.
- U.S. EPA's Office of Wastewater Management (OWM) is responsible for review of privatization applications involving federally grant-funded assets under Executive Order 12803 (E.O. 12803). In addition to Title II construction grant projects, this review extends to Special Appropriation Act Projects, earmarks, and any other construction grant project directly funded under 40CFR Part 31 rules.
  - Nearly all POTWs in the United States have received direct federal construction grants and those grants retain an enduring federal interest in the facility. E.O. 12803 was intended to promote privatization by expediting the process to remove the federal interest (still public policy today).
  - Over the past 10 years, EPA has not received any applications to utilize E.O. 12803 in this manner. In the past, OWM has reviewed several applications involving contract operation with concession fees, but these are now excluded from the purview of E.O. 12803, since its scope was confined to sale and lease deals.
  - There are two possible explanations for the lack of applications. First, it may be that P3 deals for grant funded POTWs are occurring, but EPA is unaware of them because the parties involved are unaware of E.O. 12803. It is also possible that there is no longer interest among the public or the private sector in utilizing E.O. 12803. The question remains, why is this the case and how would this information inform the debate over new approaches and models that would make P3s more attractive to private sector investors?

### **P3 Challenges**

Participants cited a number of financial, technical, and structural obstacles that prevent the mixing and matching of public and private funds.

- Revenue and funding for infrastructure projects is relatively straightforward, generated from the public through general taxes, users charges, or the combination. There are few varieties of project financing, including taxable or tax-exempt, short or long-term, equity or sub debt. From an infrastructure perspective, prioritization is often the greatest challenge to advancing P3s. To overcome this, project needs must be clearly established and communicated. An understanding of the project framework (e.g., whether it is a consent decree) is also critical.
- Participants noted that the continuously shrinking federal and state funds available to the water sector as a whole must prompt further discussion and action to better define perception of need and prioritize how subsidies are distributed.
- General public awareness and appreciation for the importance of water infrastructure is sorely lacking. Information about infrastructure threats and system needs is relatively obscure until failure occurs. The development of better strategic communications tools should be the overarching objective, as lack of public awareness is at the root of the problem. An aggressive public relations campaign, created from a sector perspective, could complement general public education and advocacy efforts. Awareness is difficult to generate because water infrastructure is generally unseen, when compared to roads, schools, and hospitals. Until the end user perceives the problem and witnesses failure, it is unlikely that the true nature of the challenge will be embraced.
- Additionally, there is a great deal of cultural resistance to financing infrastructure improvements through private means. The neglect of maintenance funding is compounded by the lack of public and political awareness of how public funding for infrastructure actually functions. Cultural challenges also exist in the form of resistance to private companies. When many private companies are engaged by communities to help evaluate problems and develop solutions, they are met by advocacy organizations that see private companies as evil profiteers, and proclaim water as a “right” that should be “free to all.” This resistance is often small in size, but unhelpful to communities attempting to address larger problems.
- Many within the water sector anticipate that the problems facing larger, urban water systems will be addressed at a faster rate than smaller, rural systems due to increased demand and urgency. However, extreme fragmentation and preponderance of small-scale systems (approximately one third of the 52,000 drinking water systems in the United States serve less than 100 people each) is going to require a massive infrastructure overhaul. A number of P3 opportunities may exist for smaller systems within a region to consolidate and be serviced by a unified private entity. Whether repurposing the subsidization process upon a consolidated process or developing other creative incentive structures.
- With respect to medium-sized systems, obtaining a credit rating to float tax-exempt financing for their infrastructure projects can be quite challenging. As a result, medium-sized systems may postpone infrastructure investment decisions in anticipation of receiving federal and state funds, regardless if privatization or private funds are available at a higher lending rate.
- Unless new financing models are embraced or political will (leadership) champions P3 solutions, discussions will likely continue to be circular until infrastructure failure forces action.

## **Conclusion**

Due in part to the challenges and opportunities related to financing water infrastructure within the United States, P3s are inevitable in the minds of many of the salon participants. There are not enough public funds and political will in today's environment to finance large infrastructure projects within the water sector, or any sector for that matter<sup>17</sup>. These are major infrastructure needs with dollar figures far too large for any public entity to access.

Until the general public perceives the severity of this problem and witnesses the failure of these systems as a result of inaction, it is unlikely that the true nature of these challenges will be fully realized and addressed in the near-term.

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<sup>17</sup> For additional resources cited by Salon participants, see Appendix A

## Appendix A: Resources

- 1 See Appendix B: *April 30, 2012 Salon Overview & Agenda*; The Horinko Group
- 2 See Appendix C: *April 30, 2012 Salon Participant List*; The Horinko Group
- 3 [\*The Horinko Group's Second Annual Water Resources Summit Proceedings; Sustaining Our Nation's Water Resources: Answering the Call for Stewardship\*](#); October 25, 2011; University of Maryland at College Park
- 4 Brent Fewell, Vice President of Environmental Compliance, United Water; [\*Financing Water Infrastructure through Public Private Partnerships\*](#); Keynote Presentation from THG Water Salon Series Part V; April 30, 2012
- 5 PPP Basics at [National Council for Public-Private Partnerships Website](#)
- 6 [\*Closing America's Infrastructure Gap: The Role of Public-Private Partnerships\*](#); Deloitte Research Study; 2007
- 7 [\*Pension Funds Investment in Infrastructure\*](#); OECD Survey; September 2011
- 8 [\*Perspectives on Public Private Partnerships\*](#); Authored by Robert Prieto, Kimberly Swain, Mel Placilla, Tyler Duvall, and James Diwik; Trial and Insurance Practice Section of the Fidelity and Surety Law Committee, American Bar Association; January 22, 2009
- 9 [\*Will Nassau County Break the Mold for PPPs in the U.S. Water Sector?\*](#) American Water Intelligence; June 8, 2012
- 10 [\*A Review of Innovative Financing Approaches for Community Water Projects\*](#); Testimony by David Dornbirer before the Subcommittee on Water Resources and Environment, Committee on Transportation and Infrastructure, U.S. House of Representatives; March 21, 2012
- 11 [\*Overview of the Santa Paula Water Recycling Facility\*](#); Case Study on City of Santa Paula, Santa Paula Water Recycling Facility; PERC Water Corporation Website; 2011
- 12 [\*An Introduction to Public Private Partnerships in Canada\*](#); Presentation from Jack Davis, Director of the Canadian Council for Public-Private Partnerships, Delivered to the 2011 Canada-Taiwan Public Infrastructure Exchange Forum in Taipei, Taiwan; March 28, 2011
- 13 [\*Public-Private Partnerships in the Provision of Water and Wastewater Services: The Canadian Experience\*](#); U.S. EPA Environmental Financial Advisory Board (EFAB) Report; September 2008

- 14 [Transportation Infrastructure Financing and Innovation Act](#); U.S. Department of Transportation Federal Highway Administration Website
- 15 [A Cost Effective Approach to Increasing Investment in Water Infrastructure: Water Infrastructure Financing Innovations Authority](#); American Water Works Association, Water Environment Federation, Association of Metropolitan Water Agencies
- 16 [A Review of Innovative Financing Approaches for Community Water Projects](#); Testimony by Thaddeus Wislon before the Subcommittee on Water Resources and Environment, Committee on Transportation and Infrastructure, U.S. House of Representatives; February 28, 2012
- 17 Salon participants cited the following resources related to financing water infrastructure –
- [Trends in Local Government Expenditures on Public Water and Wastewater Services and Infrastructure: Past Present and Future](#); U.S. Conference of Mayors; February 2012
  - [Water Infrastructure Needs and Investment: Review and Analysis of Key Issues](#); Congressional Research Service; December 2010
  - [Financing Sustainable Water Infrastructure](#); Charting New Waters Convening Report, the Johnson Foundation at Wingspread; January 2012
  - [Restoring Flows: Financing the Next Generation of Water Systems](#); Convening Report by American Rivers, Ceres, and the Johnson Foundation at Wingspread; April 2012
  - [Public-Private Partnerships in the Provision of Water and Wastewater Services: Barriers and Incentives](#); U.S. EPA Environmental Financial Advisory Board Report; April 2008
  - [Wastewater Infrastructure Financing: Stakeholder Views on a National Infrastructure Bank and Public-Private Partnerships](#); U.S. Government Accountability Office; July 2010
  - [America's Water and Wastewater Crisis – The Role of Private Enterprise](#); Lewis Solomon; 2011
  - [Failure To Act: The Economic Impact of Current Investment Trends in Water and Wastewater Treatment Infrastructure](#); American Society of Civil Engineers; December 2011

## **Appendix B: April 30, 2012 Salon Overview & Agenda**



### **Financing Water Infrastructure through Public Private Partnerships**

#### ***Finding the Right Model***

#### **The Horinko Group's Water Salon Series, Part V**

**April 30, 2012**

**Washington, DC**

#### **Overview**

In the U.S. today, public works are facing a growing crisis of aging infrastructure in urban and rural communities alike. Roads, bridges, schools, dams, levees, and drinking water systems all face a growing backlog of much-needed repair and replacement. Considering the average drinking water system degrades at a rate of 15-95 years, it is no surprise that the water sector will soon be forced to embrace an “era of replacement.” Infrastructure improvements facing municipalities include replacing sorely outdated pipes and water mains, some of which are still constructed from wood.

In the wake of such significant infrastructure backlogs, the cost of continued maintenance and recapitalization greatly outweigh the ever-shrinking funds provided through traditional state and federal government support programs such as the Clean Water Act and State Revolving Fund.

The Horinko Group's (THG) Water Division will focus the first Executive Salon of its 2012 Series on the pressing water infrastructure challenges facing our nation, exploring non-traditional financing models through public-private partnerships. Useful models that have proven effective within the transportation sector may provide the starting point for municipalities to bridge the growing funding gap. Infrastructure investments are becoming an area of real growth potential that can no longer be ignored. THG will convene thought leaders from drinking and wastewater utilities, trade associations, state and federal government, interstate commissions, economists, lenders, community planners, and local officials including rural mayors and county board members, to discuss how such new and innovative financing models may be constructed and what challenges will have to be addressed along the way.



## Agenda

**Networking Lunch** **12:00 – 12:45pm**

**Welcome and Introductions** **12:45 – 12:55pm**

*Brendan McGinnis, Director, Water Division, The Horinko Group*

**Overview of Agenda, Discussion Topics and Parameters** **12:55 – 1:30pm**

Moderator: *G. Tracy Mehan, Principal, The Cadmus Group* (20 minutes)

- Financing Water Infrastructure: Current Landscape and Challenges
- Traditional Financing Models and Limitations
- Overview of Facilitated Discussion Questions and Salon Process

*Brent Fewell, Vice President of Environmental Compliance, United Water* (15 minutes)

- Overview of Public-Private Partnership Models

**Facilitated Discussion: Old-Fashioned PPPs Just Won't Do** **1:30 – 2:40pm**

- Question #1 – *Are there effective PPP financing models, or replicable components, that exist within other sectors (e.g. transportation) that could be applied to the water sector? What are critical inputs and outputs?* (35 minutes)
- Question #2 – *What public-private entities must be at the table to ensure a workable, sustainable financing model? What role/function would each serve?* (35 minutes)

**Break** **2:40 – 2:55pm**

**Facilitated Discussion: A New Age of PPPs** **2:55 – 4:05pm**

- Question #3 – *Specifically, what would an all-encompassing PPP water financing model look like in an ideal world? How would it be structured?* (35 minutes)
- Question #4 – *Building on the previous question, what benefits would such a model provide to the financier, service provider, ratepayer, and taxpayer? What challenges/barriers exist to realizing such a model? What near-term opportunities exist for advancing such a model?* (35 minutes)

**Take-Aways and Next Steps: So, Where Does This Leave Us?** **4:05 – 4:25pm**

*G. Tracy Mehan, Principal, The Cadmus Group*

**Wrap Up** **4:25 – 4:30pm**

## Appendix C: April 30, 2012 Salon Participant List

*Mark Alpert*

Senior Vice President, Design-Build  
CH2M Hill

*George Ames*

Chief, State Revolving Fund Branch  
U.S. Environmental Protection Agency

*Fay Augustyn*

Conservation Associate  
American Rivers

*Wally Bishop*

CEO, Walter Bishop Consulting  
Former CEO, Contra Costa Water District

*Lynn Broaddus*

Director, Environmental Programs  
The Johnson Foundation

*Steve Brown*

Executive Director  
The Environmental Council of the States

*Patrick Coady*

Senior Advisor  
Coady Diemar Partners

*Kelly Colyar*

Chief, Water and Power Branch  
White House Office of Management and Budget

*Debra Coy*

Principal  
Svanda and Coy Consulting

*Tom Curtis*

Deputy Exec Director, Government Affairs  
American Water Works Association

*Tim Davies*

Director of Strategic Development  
American Water

*Greg DiLoreto*

President-Elect  
American Society of Civil Engineers

*Dave Dornbirer*

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*Brent Fewell*

Vice President of Environmental Compliance  
United Water

*Jon Freedman*

Global Leader of Government Relations  
General Electric Power & Water

*Ben Grumbles*

President  
Clean Water America Alliance

*Brendan McGinnis*

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Principal  
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*Darrell Osterhoudt*

Regulatory Affairs Manager  
Assoc of State Drinking Water Administrators

*Robert Prieto*

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*Don Riley, MG, USA (Ret)*

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*Kathy Robb*

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Hunton & Williams

*Peter Shanaghan*

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Safe Drinking Water State Revolving Fund  
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Rural Community Assistance Partnership

*Tim Williams*  
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Water Environment Federation

*Thad Wilson*  
Vice President  
M3 Capital Partners

*James Wrathall*  
Attorney at Law  
Sullivan & Worcester

Observers

*Jerry Barnes*  
Former Chief of Operations  
U.S. Army Corps of Engineers

*Isaac Chapman*  
Project Manager  
The Horinko Group

*Claudia Copeland*  
Specialist in Resources and Environmental Policy  
Congressional Research Service

*Ed Crooks*  
Vice President, Infrastructure Project Financing  
Booz Allen Hamilton

*Dawn Kristof Champney*  
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Water & Wastewater Equipment  
Manufacturers Association

*Debbie Larson-Salvatore*  
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Independence Consultant

*Catharine Ransom*  
Managing Director  
Glover Park Group

*Eli Weissman*  
Principal  
Weissman Federal Strategies

*Colin Wellenkamp*  
Director, Mississippi River Cities & Towns  
Initiative  
Northeast-Midwest Institute