



URS

PPP – A Solution for Texas Water Management



**Lower Rio Grande Valley
Water Quality Management and Planning Conference**

April 10, 2014

Agenda

- Intro
- The Need
- What is PPP
- Case Study
- What to Do

A LITTLE ABOUT ME...

Civil Engineering – 2005

MBA – 2012



Passionate about Water and Finance?

We never know the worth of water till the well is dry.

~Thomas Fuller, 1732

A LITTLE ABOUT OUR TEAM...

Foundation of Success as Owner's Technical and Procurement Advisors

		Transaction Value
Legend:	Closed	
	Ongoing	
	LaGuardia Airport – Central Terminal Reconstruction (LTA)	\$3.5+ Billion
	City of Yonkers – Yonkers Public Schools (DBFM)	\$1.7 Billion
	VA OTP3 – Interstate 64 HOV to HOT Lane Conversion	\$1.0 Billion
	PR P3 Authority – LMM International Airport (LTLA)	\$2.6 Billion
	City of Ottawa – Ottawa Light Rail Transit (DBFoM)	\$2.1 Billion
	Infrastructure Ontario - Hwy 407 East Extension (DBFM)	\$1.4 Billion
	PR P3 Authority - Puerto Rico Hwy PR-22 and PR-5 (LTLA)	\$1.4 Billion
	Ministry of Transportation Ontario - Windsor-Essex Parkway (DBFM)	\$4.8 Billion
	Mississippi Department of Transportation - Airport Parkway (DBFOM)	Ongoing
	State of Texas - TxDOT Procurement - 2006 & 2010 (DBFM and DBM)	Ongoing
	Commonwealth of Pennsylvania - Pennsylvania Turnpike (LTLA)	\$13.1 Billion
	Commonwealth of Pennsylvania - Consultant to Pennsylvania Senate	N/A
	City of Chicago - Chicago Skyway (LTLA)	\$1.83 Billion

LTLA – Long Term Lease Agreement
DBM – Design-Build-Maintain

DBFM – Design-Build-Finance-Maintain
DBFOM – Design-Build-Finance-Operate-Maintain



The Need



Water Needs

US Water Infrastructure Needs

- Assets nearing end of Useful Lifecycle
 - 240,000 Water Main Breaks, 2 Trillion Gal. Leaked

Texas Water Infrastructure Needs

- ACSE Estimates \$26 Billion in Drinking Water
- ASCE \$11.5 Billion in Wastewater
- EPA 2012 - Projected Funding Shortfall of over \$540 billion over the next two Decades

To Bridge the Gap – Public Authorities are Turning to Alternative Delivery and Financing Methods

Passage of SB 1048 (2011)

- Public – Private Partnerships or PPP
 - Assist Infrastructure Assets in getting Completed Faster and with a Greater Value to the Public
 - No Universal Definition of PPP



So What is PPP



Generally Speaking...

- Procurement Model that Considers
 - Risk Transfer (From Owner to Proponent)
 - Bundles Services (Maintenance and Operations)
 - Considers Life Cycle Costs
 - Increased Flexibility
- Promotes Competition and Innovation

Myth #1 – Public Entity Loses Ownership of Asset
NOT TRUE

Types of Water Projects



- T-Bar Ranch Pipeline (Midland, TX)
- Eagles Point Wastewater Treatment Plant (St. Paul, MN)
- Arbennie Pritchett WRF (Okaloosa Co., FL)
- Lake Pleasant Water Treatment Plant (Lake Pleasant, AZ)
- Spokane Water Reclamation Facility
- Pima Water Reclamation Facility
- East Providence wastewater collection and treatment facilities
- Santa Paula Water Recycling Facility (CA)
- City of Bayonne Water and Wastewater concession (NJ)
- Carlsbad Desalination Project (San Diego, CA)

Project Delivery Options

**PPP
(DBFoM)**

**Design/Build
(D/B)**

**Design Bid Build
(DBB)**

**Construction
Manager at Risk
(CMAR)**

LEAST	OWNER'S RISK	GREATEST
GREATEST	CONTRACTOR'S RISK	LEAST
LEAST	OWNER'S CONTROL	GREATEST
GREATEST	CONTRACTOR'S CONTROL	LEAST

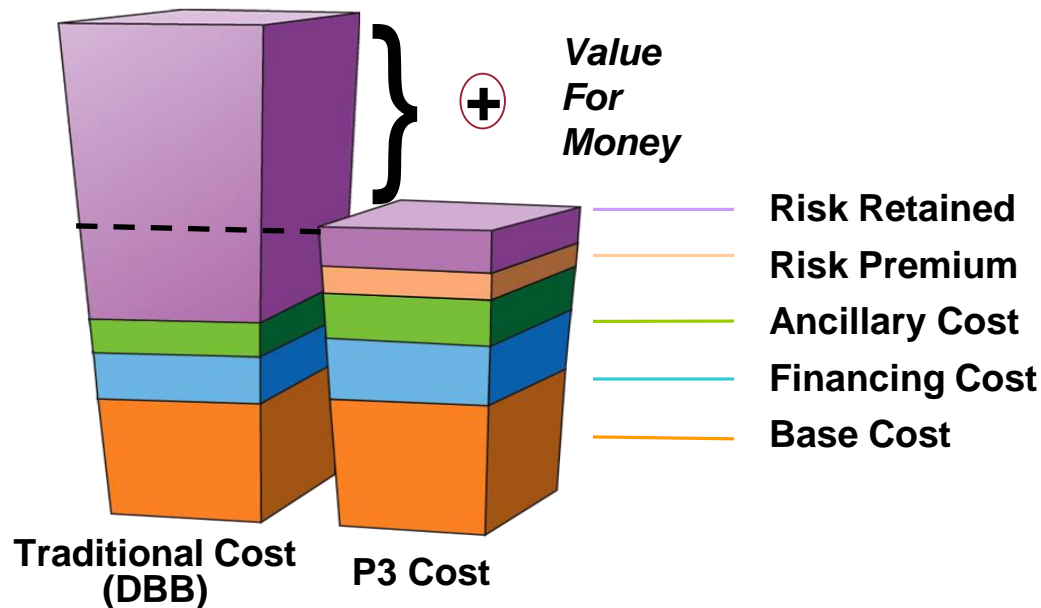
Comparison Analysis – Project Delivery vs. Objectives

Project Objectives	DBB	D/B	CMAR	DBFoM	Comments
Timeliness	●	●	○	●	
Flexibility	○	○	○	○	
Design	○	○	○	○	
Integration with community	●	●	●	●	Uniform project requirements for all Methods
Maximizes site development	○	●	○	●	
Asset quality & longevity	○	○	○	●	
Maximizes competition	○	●	○	●	
Local participation	●	●	●	○	
Fairness & transparency	●	●	●	●	Procurement quality independent of Delivery Method
Environmental sustainability	●	●	●	●	Uniform project requirements for all Methods
Risk allocation	○	○	○	●	
Cost certainty	○	○	○	●	Considers both Construction and Long-Term
Value-for money	○	●	○	●	Supported by VfM Analysis
Affordable	○	●	●	●	
Parking	●	●	●	●	Uniform project scope for all Methods

KEY:	●	Strongly Achieves Objectives
	○	Mostly Achieves Objectives
	○	Achieves Some Objectives

How to Make a Decision on Delivery Method

VfM is a process of comparing costs using two delivery models to determine which is the better value proposition.

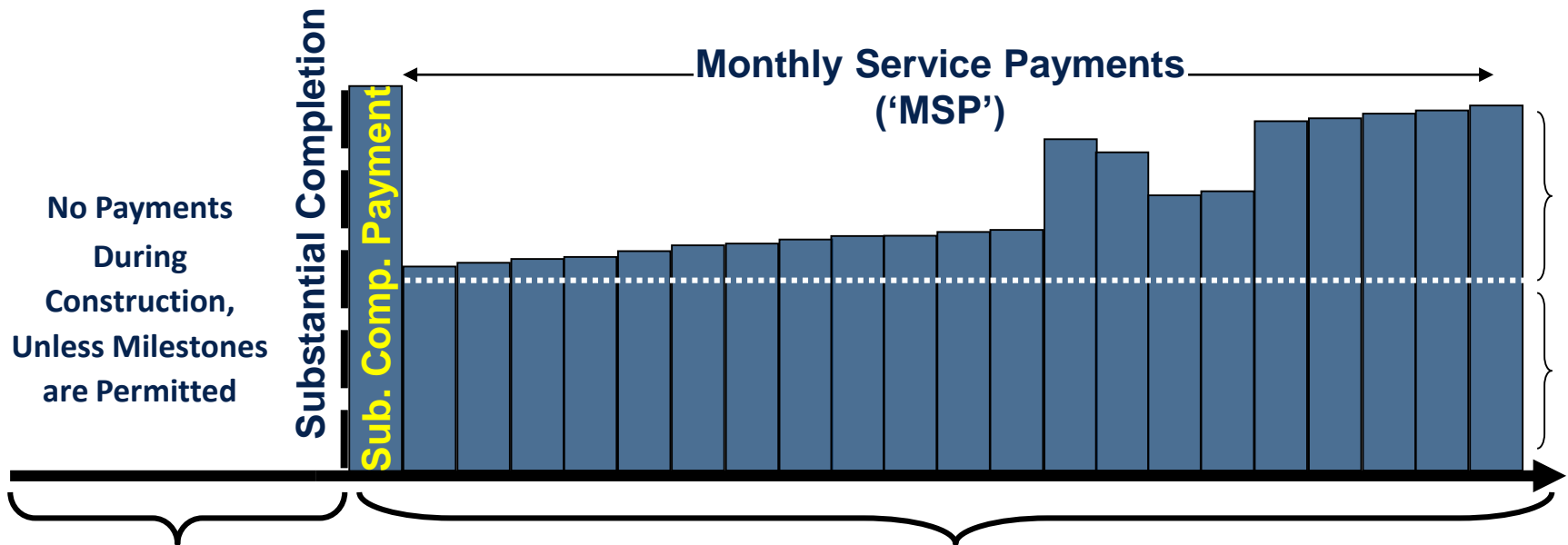


Myth #2 – PPP Only Works for Really Large Projects
NOT TRUE ANYMORE

Total Project Costs & Value for Money (VfM)

Total Costs to the County		DBB	D/B	CMAR	DBFoM
Projected Discount Rate 7.00%		Total (\$'000s)	Total (\$'000s)	Total (\$'000s)	Total (\$'000s)
Construction Phase Costs (NPC)		NPC	NPC	NPC	NPC
Design & Construction Costs		207,822	201,592	211,978	0
County Funding for DBFoM Design & Construction Costs		0	0	0	115,615
Risks Transferred (incl. Escalation)		2,780	3,887	3,767	0
Retained Risks		14,206	7,610	13,220	3,870
Owner's Costs		27,765	26,855	27,765	26,001
Honorarium		0	763	763	763
		252,573	240,706	257,493	146,249
Operating Phase Costs					
Operating Costs		49,021	49,021	49,021	0
Retained Operating Costs Risks		5,925	6,260	6,260	362
Maintenance Costs		16,873	16,873	16,873	0
Total Service Payments under DBFoM		0	0	0	165,740
		71,819	72,154	72,154	166,101
Total NPC of County Costs		324,393	312,860	329,647	312,351
Value for Money Results			11,533	(5,254)	12,042
			3.6%	-1.6%	3.7%

Payment Structure



Construction Phase (~ 3 years):

- Design and Construction by Project Co.
- Construction Financing

Performance Term (30 years):

- Maintenance/Services by Project Co. According to Output Specs
- Payments to Project Co covering:
 - Debt Service
 - Equity Distributions
 - Maintenance/Service*
 - Lifecycle Payments

Accountability – The Measuring Stick:

Why It's So Important

- Ensures Safety remains the foremost and principal concern the work.
- Critically important to the quality of project and life.
- The measuring methodology that the Performance Criteria and Objectives continually are:
 - Being met;
 - In compliance with Project Agreement;
 - Maintained throughout; and
 - Do not recede or subside in value, safety or quality.

Design Build Finance operate & Maintain (DBFoM)

Benefits:

- Provides price certainty in both short-term (construction) and long-term (life-cycle)
- Provides schedule certainty as internal repayment of lenders to Private Entity have many date “certains”
- Large opportunity for implementation of innovations, ingenuity, and best practices
- Typically provides clear Total Overall Price reduction when model fits the Project
- Highly integrated team that is also highly incentivized for long-term quality
- Excellent competitive tension, which drives value
- Long-Term quality guaranteed against equity investment
- Maximizes risk transfer

Limitations:

- Newest Project Delivery method that can be quite complex as it spans many years
- Loss of control on many traditional elements as delivery is “outcome based” and guided by performance specifications
- One-off nature can drive up internal costs and education for first transaction
- Procurement and evaluation is extremely strict and guided, but can be quite complex
- Cost of private financing for availability equity is greater than equivalent rates for public finance



Case Study





PRINCE GEORGE'S COUNTY, MARYLAND CLEAN WATER ACT PPP PROGRAM



THE MANDATE

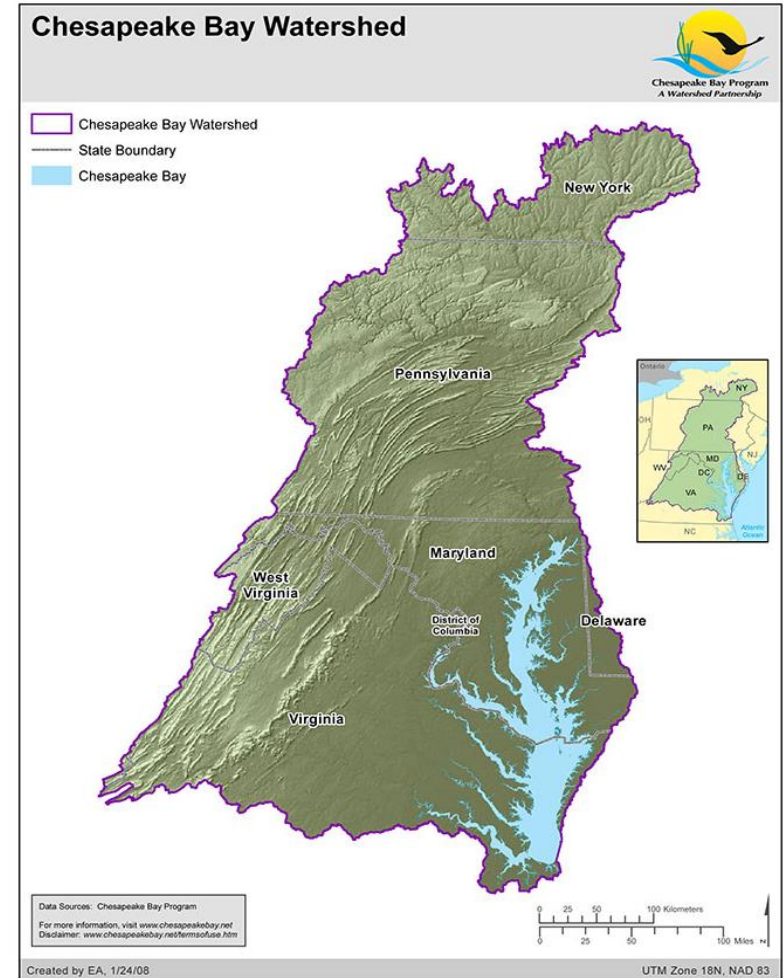
FEDERAL & STATE REGULATIONS

■ The Clean Water Act

- National Pollutant Discharge Elimination System (NPDES)
- Municipal Separate Sewer System Permit (MS4)
- Chesapeake Bay TMDL (Restoration program)
 - Retrofit Restoration Program
 - Watershed Implementation Program (WIP)
 - HB 987-2012 Mandate to Fund Retrofits

■ Penalties Civil and Criminal

■ Loss of Delegated Authority (Building Permits)



CLEAN WATER ACT MANDATE

Public Health Safety and Welfare Issues

Stream Erosion & Pollution



Trash

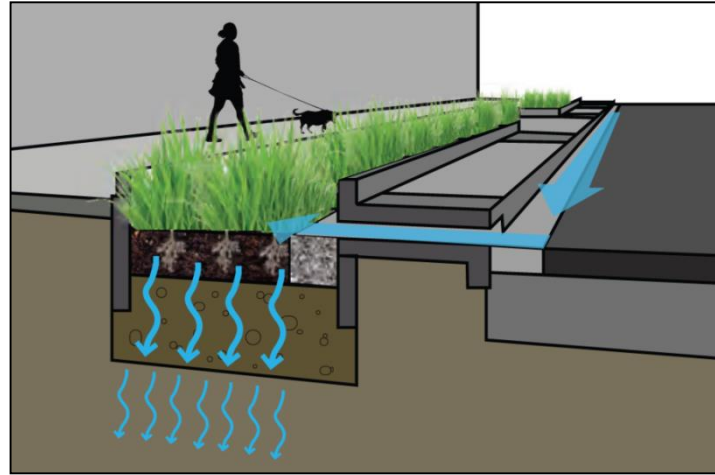
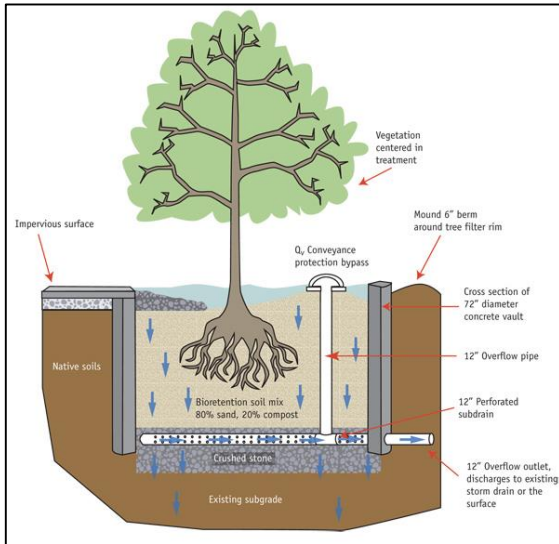
Fish Kills,
Cancer



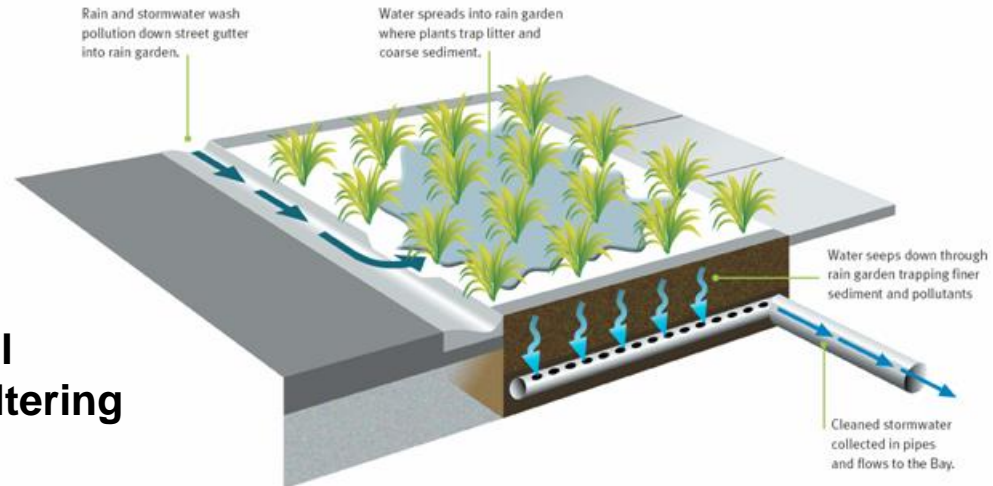
THE PROPOSED SOLUTION

Green Street Retrofits & Beautification Upgrades

Tree Planter with Filtering Media



Filtering Media for Street Application



Commercial Application of Filtering Media

THE PROPOSED SOLUTION

Green Street Retrofits & Beautification Upgrades



**Residential R/W applications
with filtering media**

**Street retrofit with green
filtering devices**



THE PROPOSED SOLUTION

Bio-retention & Rain Gardens



**Rain Garden
(Municipal Applications)**

**Rain Garden
(Residential Applications)**



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WHAT TO DO...



OWNER SIDE ADVISORS

Principles and Approach:

- ✓ Ensure deep bench of Subject Matter Experts
- ✓ Help define the optimal risk transfer
- ✓ Create bankable Technical, Financial, Commercial and Business Terms
- ✓ Provide maximum value, innovation, best practices and ingenuity pathways and opportunities
- ✓ Help the private sector understand the public sector, and vice-versa
- ✓ Help make sure Owner's anticipated outcomes are achieved

OWNER SIDE ADVISORS

What We Protect:

- ✓ **Protecting the Transaction progress and completion**
- ✓ **Avoiding unnecessary or regrettable commitments**
- ✓ **Making sure the Project Agreement addresses the risks properly and equitably**
- ✓ **Making sure an asset lifecycle approach is applied**
- ✓ **Ensuring Value For Money**
- ✓ **Protecting the Public's Interest**

Lessons Learned

- Alternative delivery and finance models are being successfully utilized across the US
- Well designed P3 structures can deliver better value-for-money for tax payers and water end users
- Market survey of existing projects evidences a wide array of potential benefits from P3 and alternative delivery
- One-size-does-not-fit-all
- Ideally, before deciding the best delivery option, public authorities will undertake a Value-for-Money analysis to determine the structure that best suits its specific requirements
- **Public authorities should seek support and assistance when designing and implementing these projects, to ensure that they are delivered in a successful and sustainable manner**
- Choose your partners wisely!

THANK YOU!

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**Alternative Finance & Procurement, and PPP
Infrastructure / Water**

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