Texas Desal Association

Alternative Delivery Mechanisms to Develop Drought Proof Water Supplies in Texas

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POSEIDON WATER

Poseidon Water

- **Poseidon Water: Leading U.S. water infrastructure development specialist employing a performance-based, Public-Private Partnership approach**
  - **Founded in 1995; headquartered in Boston, MA with presence in CA, FL, and TX**
  - **Developer of Carlsbad Desalination Plant and other water infrastructure projects**
  - **Majority owned by Brookfield Infrastructure Partners**
- **Brookfield Asset Management: Global owner and operator of alternative assets**
  - **115-year track record in real assets with a global presence (100 offices or locations; ~55,000 employees)**
  - **$250B of assets under management (AUM) – $135B in U.S. (~11,000 employees)**
  - **$60B in infrastructure investments: ports, water, railways, natural gas transmission pipelines, toll roads, and electricity transmission lines**
  - **Brookfield in Texas (as of June 2016):**
    - **Assets: $13.3B AUM; ~165 projects/assets; Employees: ~980**

Texas Desal Legislation | 2017

- SB 1430 (Sen. Perry/Rep. Lucio III), proposed by Poseidon, took effect on September 1st, 2017
  - Expected to strengthen incentives for the creation of desalinated seawater supplies along the state's 367-mile coastline by:

    1. Streamlining and expediting the permitting process to extend benefits upstream

    2. Provides that the holders of water rights in any Texas river basin will be entitled to an expedited permit amendment of their existing water rights by the Texas Commission on Environmental Quality (TCEQ) when they diversify their water supply to include seawater desalination

    3. Applications subject to a hearing, applicants will be entitled to a decision within 270 days on proposals to move their surface water diversion point(s) upstream within the same river basin

    4. The law does not provide those benefits to the transfer of water rights from one river basin to another

What is a Public-Private Partnership ("P3")?

- **A method of delivering public infrastructure in which significant risks are transferred to the private sector developer, operator, and finance partner**
- **Single entity ("Project Company") accepts responsibility to Design, Build, Finance, Operate, Maintain, and Transfer the assets in operating condition to the Public Partner at the end of the Contract Term**
  - **Project Company established by Developer to implement the Project**

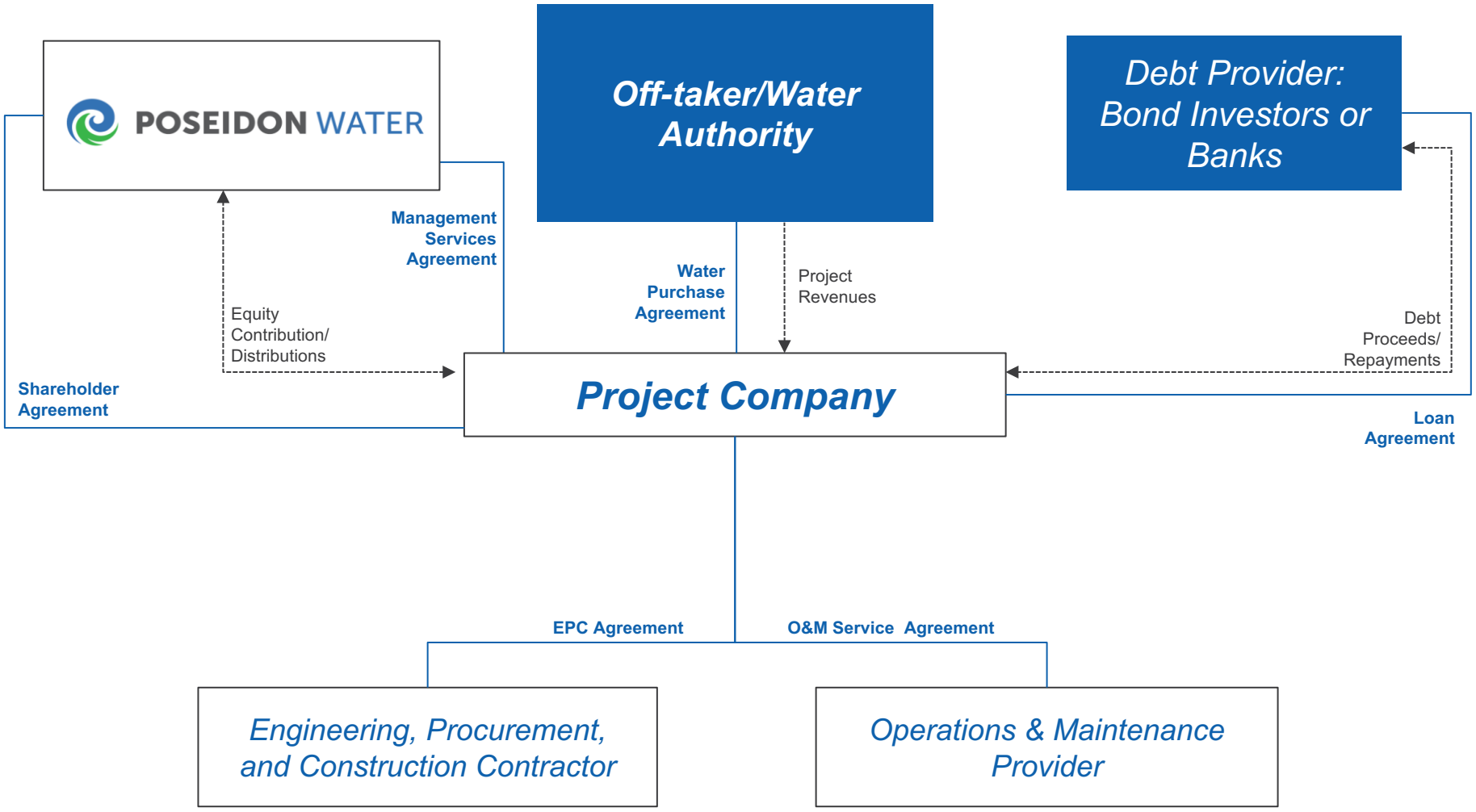
    - Alignment of interests between Public and Private sector
    - Guaranteed on-time and on-budget performance
    - Accelerated delivery of critical project infrastructure
    - Public asset investment is protected because facility condition and performance is guaranteed for a long-term period (30 to 50 years)
    - Provides greater "value-for-money," reflecting the added value of risk transfer (operation, maintenance, compliance, delivery, etc.) using a P3 approach as compared to a traditional project delivery

Public-Private Partnership ("P3") Overview

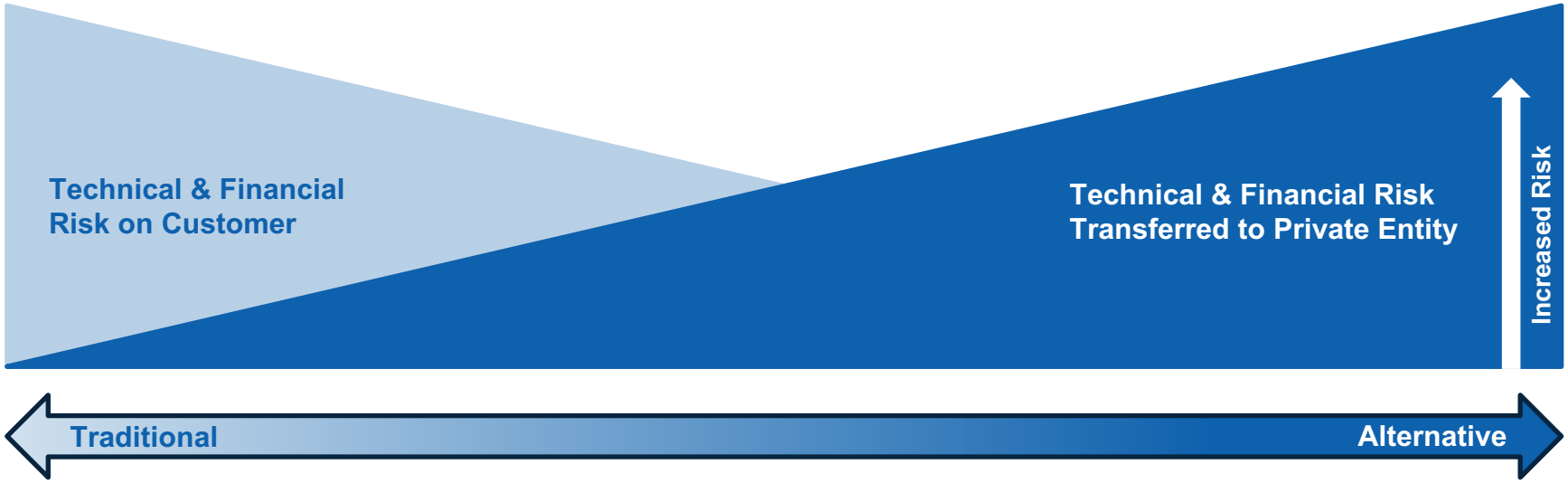
- **Development: Project Company funds all upfront development expenses to fully define the project, secure permits, and establish final pricing**
- **Construction: Project Company provides project funding (debt & equity), potentially including tax-exempt public financing through Private Activity Bonds, WIFIA and State Revolving Funds**
- **Risk Transfer: Public Partner only pays if Project Company meets performance obligations**
  - **Creates real value for taxpayers by transferring the risk of cost overruns, schedule delays, performance shortfalls, and deferred maintenance**
- **Debt Burden: Preserves public partner debt capacity with potential for credit improvement**
- **Expedited Schedule: Accelerated project delivery is not constrained by lengthy procurement processes**
- **Asset reverts to public ownership and operation at end of P3 contract term**

Public-Private Partnership is Not Privatization

Typical Project Structure



Project Delivery Options



DBB	DB	DBO	DBFOM
Design Bid Build	Design Build	Design Build Operate	Design Build Finance (Own) Operate Maintain (Transfer)

Potential Risk Allocation

Risk Description	Project Company	Water Agency
Permitting		
Financing		
Interest Rate		x
Construction		
Technology		
Operating Performance		
Electricity	 *Consumption*	x *Pricing*
Wastewater Supply & Quality		x
Regulation/Change in Law*		x

Public-Private Partnerships Benefits

Concerns	Benefits
Higher Cost of Funding	• Incentivizes overall lower lifecycle cost • Public Agencies lack of sufficient public funding to meet water infrastructure needs • Ability to combine public and private funding sources; traditional tax-exempt public financing is not always the lowest cost financing for municipal facilities • P3 entities are able to access a wide range of financing options, including both taxable and tax-exempt (Public) debt & equity
P3 is Privatization	• Public Private Partnership is not Privatization • Flexibility to structure P3 Projects as service agreements, lease/concession agreements, or full asset ownership by the Project Company under Public oversight • Roles and responsibilities of Public and Private Partner are well defined in P3 Contract
Board/Utility Control of the Asset	• P3 Contract defines controls desired by the Public entity in the system/assets • Public entity maintains oversight and step-in rights • Scope book, standards and regulation, guarantees, revisions/approval rights ensures Public entity controls
O&M Integration Difficulties	• P3 Contract structured to integrate O&M of Project Company with existing operations • Option for Public employees to work for the Project Company • Transfer of the Project and its operations to the Public entity at end of the contract term
Take-or-Pay Contract restricts Public Entity	• Take-or-pay agreement is a fixed cost, similar to debt payments, overhead, O&M costs, etc. associated with Public financing • P3 is based on a performance-based contract; Public entity doesn't pay if Project Company doesn't meet performance obligations • P3 provides long-term price and rate certainty
No Value to Risk Transferred	• Value-for-money (V*f*M) analysis is a useful tool to evaluate value of risk transfer • Multiple components of projects can be delivered using split delivery method • Inclusion of long-term equity is the critical component that drives performance, efficiency and innovation

Texas P3 Legislation

- P3 Legislation SB 1048 enacted by Texas legislature in 2011
  - Public and Private Facilities and Infrastructure Act
  - Framework and standardized approach to P3s in Texas
  - Qualifying projects include water supply and waste treatment facilities
  - Includes framework to provide unsolicited proposal
  - Government agencies/municipalities must adopt individual guidelines
    - Certain State agencies and the cities of San Antonio, Dallas, and El Paso have adopted P3 legislation

Texas Groundwater Aquifers

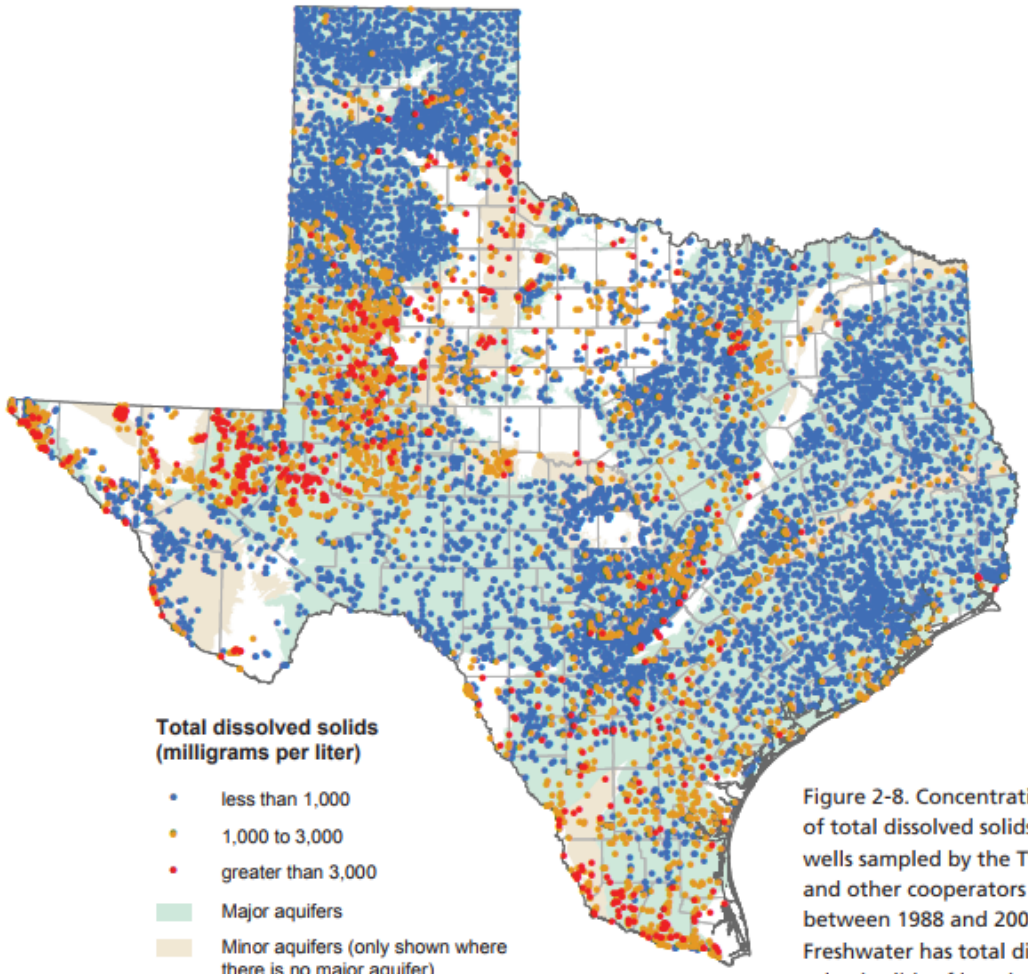
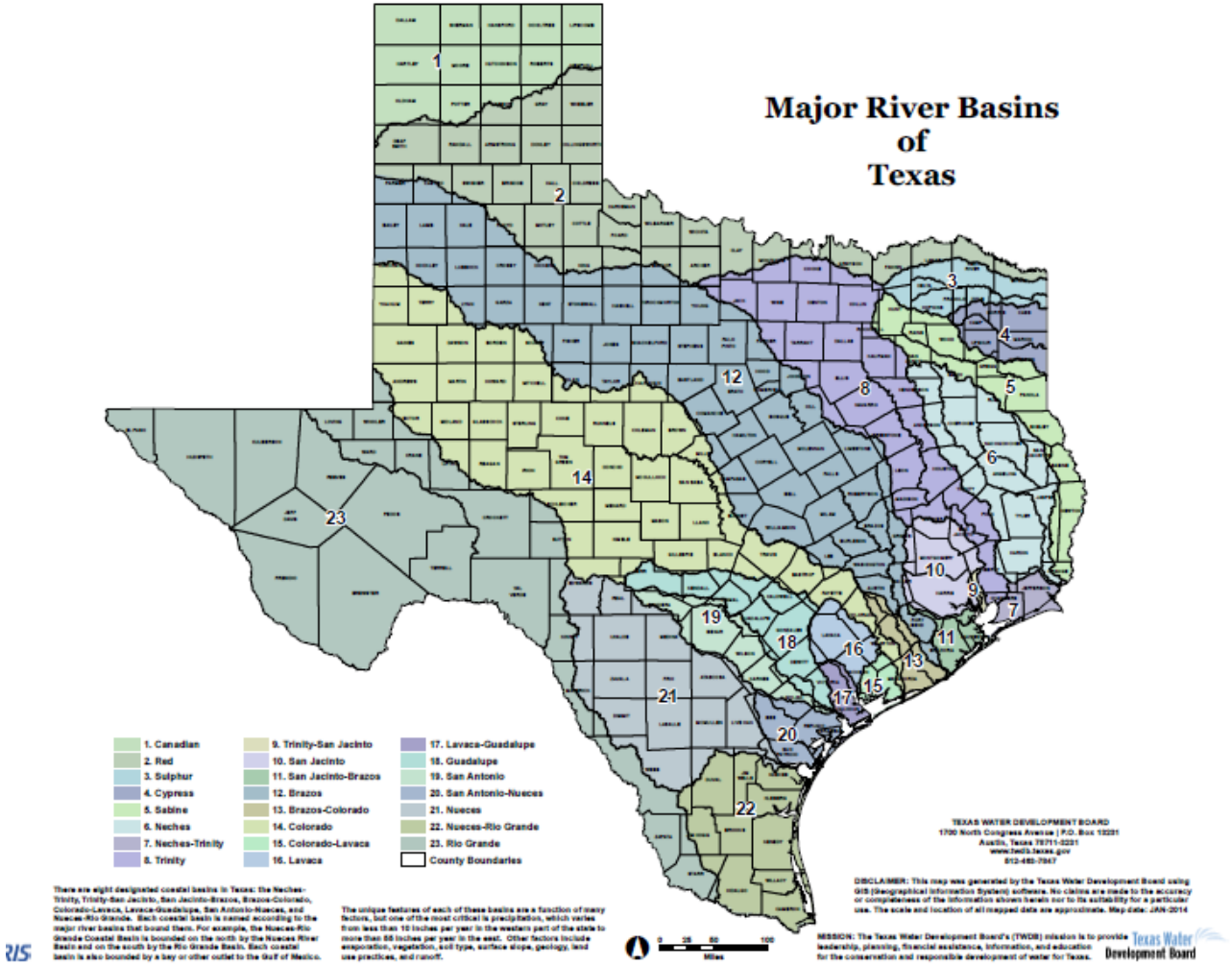


Figure 2-8. Concentration of total dissolved solids in wells sampled by the TWDB and other cooperators between 1988 and 2004. Freshwater has total dissolved solids of less than 1,000 milligrams per liter.

Source: https://www.twdb.texas.gov/publications/reports/numbered_reports/doc/R380_AquifersofTexas.pdf?d=5133.710000000001

Texas River Basins

- **Upstream benefits of desalination**



Questions?

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