White Paper Overview

- Focus on stormwater sector
- Covers “market-based” approaches
  - trading, incentives, offsets, mitigation, etc.
- Intended to be a strawman document
White Paper Overview

Areas Covered

– Introduction to stormwater management
– Navigating a “Jungle of Terms”
– Defining the universe of approaches
– Drivers for investment
– Policy challenges/barriers
– Programmatic frameworks
Session Outline

• Present information on topics
• Provide discussion questions
• Work in small/large groups
• Report out / discussion
Topic Taxonomy: Navigating a Jungle of Terms

- Market-Based
  - Incentive-Based
    - Fee Reduction Vehicles
    - Subsidies
      - Insurance Premium Discount/Reduction
  - Trade-Based/Transactional
    - Inter-Jurisdictional
      - Municipal MS4-Driven Demand
        - Development-Driven Demand
        - DOT MS4-Driven Demand
        - Stormwater Trading
        - Stormwater Banking
      - Intra-Jurisdictional
        - Stormwater Offsets/Alternative Compliance
Defining the Universe of Approaches

Market-Based Approaches
- Not limited to "free market" approaches
- "Focuses on a wide array of frameworks that relay on elements inspired by the business of private sector"
  - Incentive-based
  - Trade-based/transactional
Incentive-based approaches

- Fee Reduction Vehicles
  - Credits, rebates, discounts
- Subsidies
  - Direct payment, cost-based threshold
- Insurance Premium Discounts/Reduction
  - Hypothetical at this point
Defining the Universe of Approaches

Trade-Based / Transactional Approaches
  – Inter-jurisdictional vs. Intra-jurisdictional
  – Trading
  – Mitigation
  – Offset
  – Fee-In-Lieu
Defining the Universe of Approaches

Trade-based / transactional approaches
  – Inter-jurisdictional trading, mitigation and offsets
    • Municipal MS4-driven demand
      – Chesapeake Bay region
    • DOT MS4-driven demand
      – New Jersey, Virginia
    • Development-driven demand
Defining the Universe of Approaches

Trade-based / transactional approaches
  – Intra-jurisdictional trading, banking, and offsets
    • Stormwater trading
      – DOEE, Chattanooga
    • Stormwater banking
    • Stormwater offsets and Fee-in-Lieu
      – Alternative compliance (San Diego et al)
Navigating a Jungle of Terms / Defining the Universe of Approaches

**Discussion Questions**

1. **Do the categories presented in this section reflect the full universe of options** for incentive-based and trading/transaction-based programs for stormwater infrastructure investment? If not, **what categories have been left out?**

2. **Are the categories presented in this section appropriate?** If not, what other categorical framework should be used in the sector?

3. Should the phrase “market-based” be used to capture the wide swath of incentive and trading programs in the stormwater sector? If not, what should this umbrella term be?

4. Does the use of the term “incentive” to refer to non-transactional approaches to green stormwater infrastructure investment?

5. **What term is most commonly used for a stormwater fee reduction?** Rebate? Discount? Credit? What should be used in order to avoid confusion in the future? **Does it matter?**
Drivers for Investment

• Regulatory
  – NPDES
    • MS4
    • CSO
  – TMDL
• Non-regulatory
  – Resilience
    • Climate change, sea level rise, sustainability
  – Social/Economic
    • Economic development, job creation
Drivers for Investment

Discussion Questions

1. How significant are regulatory and non-regulatory drivers?

2. Which regulatory drivers are best suited for a market-based program? Why?

3. Which non-regulatory drivers are best suited to drive interest in a market-based program? Why?
Policy Challenges/Barriers

Incentive-based approaches
– Set the “right” rebate or subsidy
– Tax codes
– Upfront capital
– Maintenance responsibility
Policy Challenges/Barriers

- Trading/transactional-based approaches
  - Regulatory drivers
  - Programmatic costs/complexity
  - Trading currency
  - BMP efficacy and regulatory credit
Policy Challenges/Barriers

- Trading/transactional-based approaches
  - Baseline of current program performance
  - Credit life
  - Local impacts
  - Holistic stormwater management
Discussion Questions

– Set the “right” rebate or subsidy
  • Is the rebate/subsidy high enough to move the needle?

– Tax code impacts
  • Is a stormwater infrastructure investment considered a betterment (taxable event)?
  • Other?
Policy Challenges/Barriers
Incentive-Based Approaches

**Discussion Questions**

– **Limited property owner upfront capital**
  - How can capital be generated for onsite investments?

– **Ownership of maintenance responsibility**
  - If a maintenance agreement requiring the property owner is part of an incentive-based program, what assurance does the public entity have that adequate maintenance will be provided?
Policy Challenges/Barriers
Trading/Transactional-Based Approaches

Discussion Questions

– Regulatory drivers
  • Is the lack of numeric targets and lack of enforcement limit market-based approaches?

– Programmatic costs and complexity
  • Do administrative costs and programmatic complexities create barriers for market-based approaches, especially for small- and mid-sized communities?
Discussion Questions

– Trading currency
  • Does differing pollutants of interest in stormwater programs create a barrier to large-scale trading?

– BMP efficacy and regulatory credit
  • Does a reliance on technology-based performance standards limit stormwater trading?
Policy Challenges/Barriers
Trading/Transactional-Based Approaches

**Discussion Questions**

– Program baseline
  - What is an appropriate baseline for a stormwater program?

– Credit life/duration
  - What should be the lifetime of credits generated in a stormwater trading program?
Discussion Questions

– Local impacts
  • What is an appropriate percentage of a program’s regulatory obligation that can be purchased outside of a jurisdiction or a watershed through credits while still respecting needs of local waters and the community?

– Holistic stormwater management
  • A least-cost option in a trading program may lead to unintended consequences of focusing on a few downstream solutions rather than many high-value BMPs – how do we ensure holistic investments?
Programmatic Frameworks

Market structure

- Exchange
  • A platform for trades to occur between multiple parties in an “open market” forum.

- Bi-lateral
  • A negotiation approach is one in which a credit purchaser faces multiple credit generators, and the purchaser must decide which generator to utilize.

- Clearinghouse
  • Clearinghouses are similar to a retail store, as the approach is based upon an entity (usually a public entity) paying for pollutant reductions and then selling credits at a fixed price. By eliminating transaction costs associated with a bi-lateral trade, overall costs may be reduced.

- Sole-Source offset
  • Sole-source offsets, which have been previously presented, is not trade-based, but allows for pollutant reductions to be gained off-site to compensate for pollutant generation on another site.
Programmatic Frameworks

Administration

– Municipal
  • Public led oversight
  • Public bears all costs, can be reduced through regional program

– Public/Private
  • Public-private partnership model
  • Can be more efficient, private sector bears more costs/risks

– Third-Party
  • Usually NGO-led, Pay-For-Success/Pay-For-Performance model
Programmatic Frameworks

Discussion Questions

– Market structure
  • Which market structure(s) is (are) best suited to the stormwater sector?

– Programmatic administration
  • Is there an administrative party better or best suited to the stormwater sector?
Thank you