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Douglas Pabst, Chief
Drinking Water and Municipal Infrastructure Branch
pabst.douglas@epa.gov



Green Business Forum for Asia and the Pacific
Investing in a Sustainable Future

22–24 November 2016 • ADB Headquarters



How NYC Provides High Quality Unfiltered Drinking Water? Leveraging Regulation and Partnerships



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NYC Water Supply

9 Million People

1.3 billion gallons/day

2000 square miles

19 reservoirs and 3

controlled lakes

125 miles from NYC

Croton filtered

Catskill/Delaware is unfiltered

www.nyc.gov/dep



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Federal Surface Water Treatment Rule

■ Source Water Quality Criteria

- ◆ Coliforms
- ◆ Turbidity

■ Site-Specific Criteria

- ◆ Disinfection
- ◆ **Watershed Control**
- ◆ On-site Inspection
- ◆ Absence of waterborne disease outbreaks
- ◆ Total coliforms
- ◆ Total trihalomethanes



Filtration Avoidance – Program Elements

- Objective criteria compliance
- **Land acquisition**
- **Agricultural program**
- Infrastructure
 - ◆ Septic systems
 - ◆ Wastewater treatment plant upgrade program
 - ◆ Stormwater controls
- Waterfowl management
- Forestry program
- Wetlands protection
- Kensico program
- Monitoring/Modeling/GIS
- Watershed Rules & Regs
- Wastewater Treatment Plant inspection program
- Disease surveillance
- Cross connection controls
- Education and outreach
- Stream management
- Pollutant Loading Calculations



Land Acquisition Program

- Land ownership is the best means of protecting water quality
- Requirements:
 - ◆ Solicit 355,050 acres – vacant land from willing seller
 - ◆ Prioritized by proximity to reservoirs and distribution system
 - ◆ \$300 million commitment over 15 years



Conservation Easements

- Easements stay with the land not the owner
- Works with farmers who have a Whole Farm Plan on their property.
- There are 87,300 acres of priority farmland that remain uneased in the Watershed.
- The process takes about 27 months (up to 3 years) to close from start to finish.
- More than 5,000 Best Management Practices installed on 288 farms but only a small portion of these BMPs have been secured through a conservation easement.



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Farm Rescue of At-Risk Properties

- Provide a contingency fund to secure in-fee interests on at-risk/transition lands with BMP investments. Such lands will be transitioned to new operations consistent with a WFP and are to be encumbered by the Conservation Easement upon conveyance.
- looking to align investment dollars with young farmers who can't afford full market value for a farm



Watershed Agricultural Program

- 300 farms in watershed (gross > \$10,000)
- Potential source of pathogens and nutrients to source water
- Objective – improve water quality through multi-barrier approach:
 - ◆ Source control
 - ◆ Transport reduction across farm
 - ◆ Prevention of contaminant deposition in watercourses

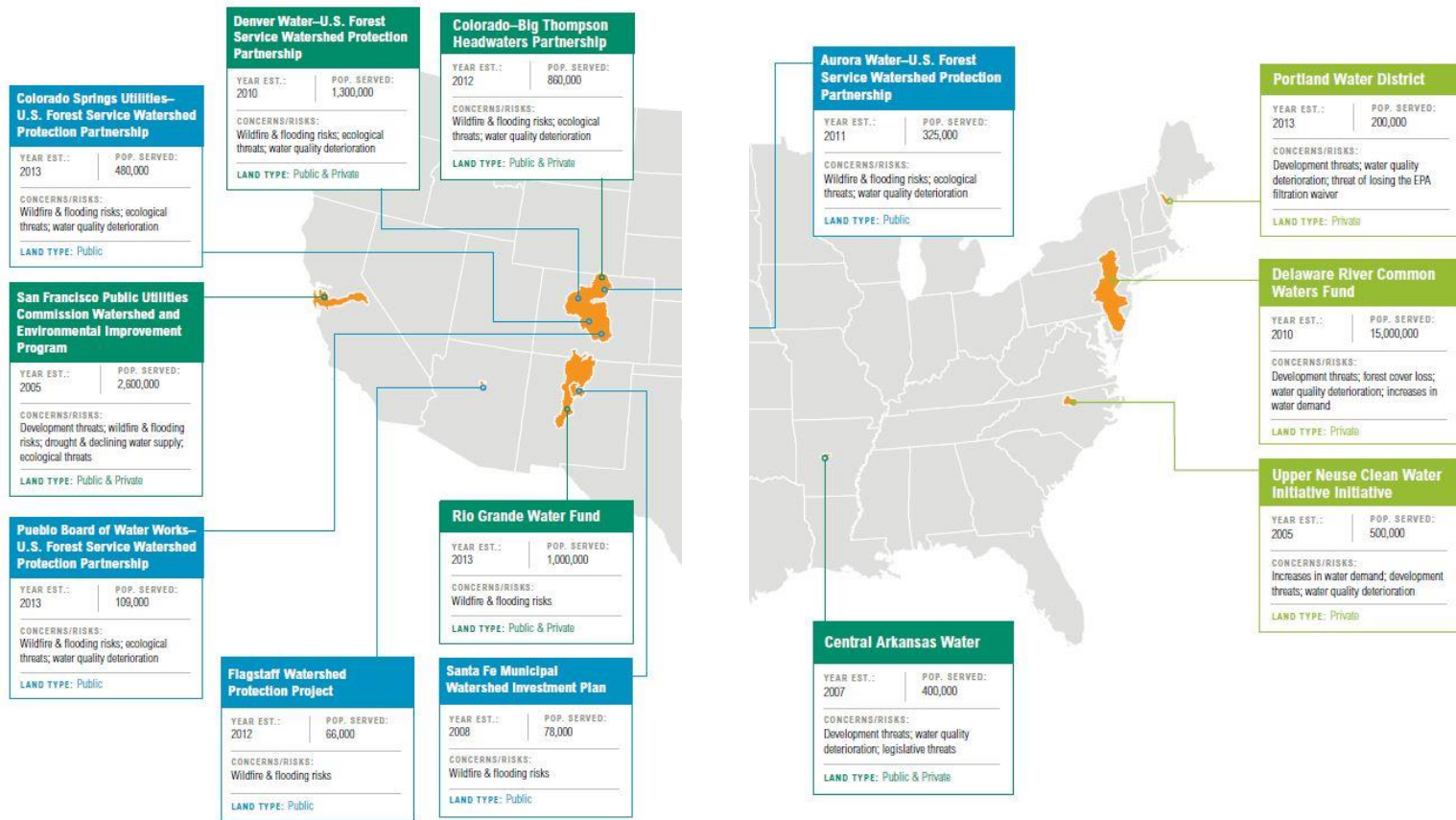


Watershed Agricultural Program Cont.

- Agricultural Engineers work with Farmers to Develop Whole Farm Plans
- Typical Elements of Whole Farm Plans include Manure Storage, Nutrient Management Plans which control Timing and Location of Manure Spreading, Barnyard Runoff Control, Filter Strips along Streams
- Construction of Control Measures is Funded by New York City
- www.nycwatershed.org



How Does NYC's Program Compare to Other Watershed Investment Programs



How Does the NYC's Program Compare to Watershed Investment Programs

- Similar Approach
- Larger population
- Larger volume of water
- Economic Incentive
- NYC fully Funds the Program, \$1.2 billion and counting
- More resilient to security threats and climate change



EPA National Financing Programs

- Clean and Drinking Water State Revolving Fund Programs
- Water Infrastructure Finance and Innovation Act (WIFIA)
- Water Infrastructure and Resilience Finance Center
- EPA Regional Environmental Finance Centers

Clean and Drinking Water State Revolving Fund Programs



Water Infrastructure Finance and Innovation Act (WIFIA)

- Federal loan program administered by EPA
- Purpose is to accelerate investment in our nation's water infrastructure
- Innovative tools to assist municipalities in managing and adapting to extreme weather resiliency, energy efficiency, and incorporating green project concepts into the repair or replacement of aging gray infrastructure.
- www.epa.gov/wifia



Water Infrastructure and Resilience Finance Center

- Information and assistance center helping communities make informed decisions for drinking water, wastewater, and stormwater infrastructure.
- www.epa.gov/waterfinancecenter
- Provides support to ten EPA Regional Environmental Finance Centers across the nation.
- www.epa.gov/envirofinance



Questions to Consider

- What specific advice would you give to our audience that will help them be successful in protecting their watersheds and attracting green business?
- Given the importance of communication (i.e. education, outreach, marketing) in establishing watershed protection programs/partnerships and growing green business opportunities, what worked best? Least?

