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Douglas Pabst, Chief

Drinking Water and Municipal Infrastructure Branch

pabst.douglas@epa.gov



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Investing in a Sustainable Future

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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.



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 consistency 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

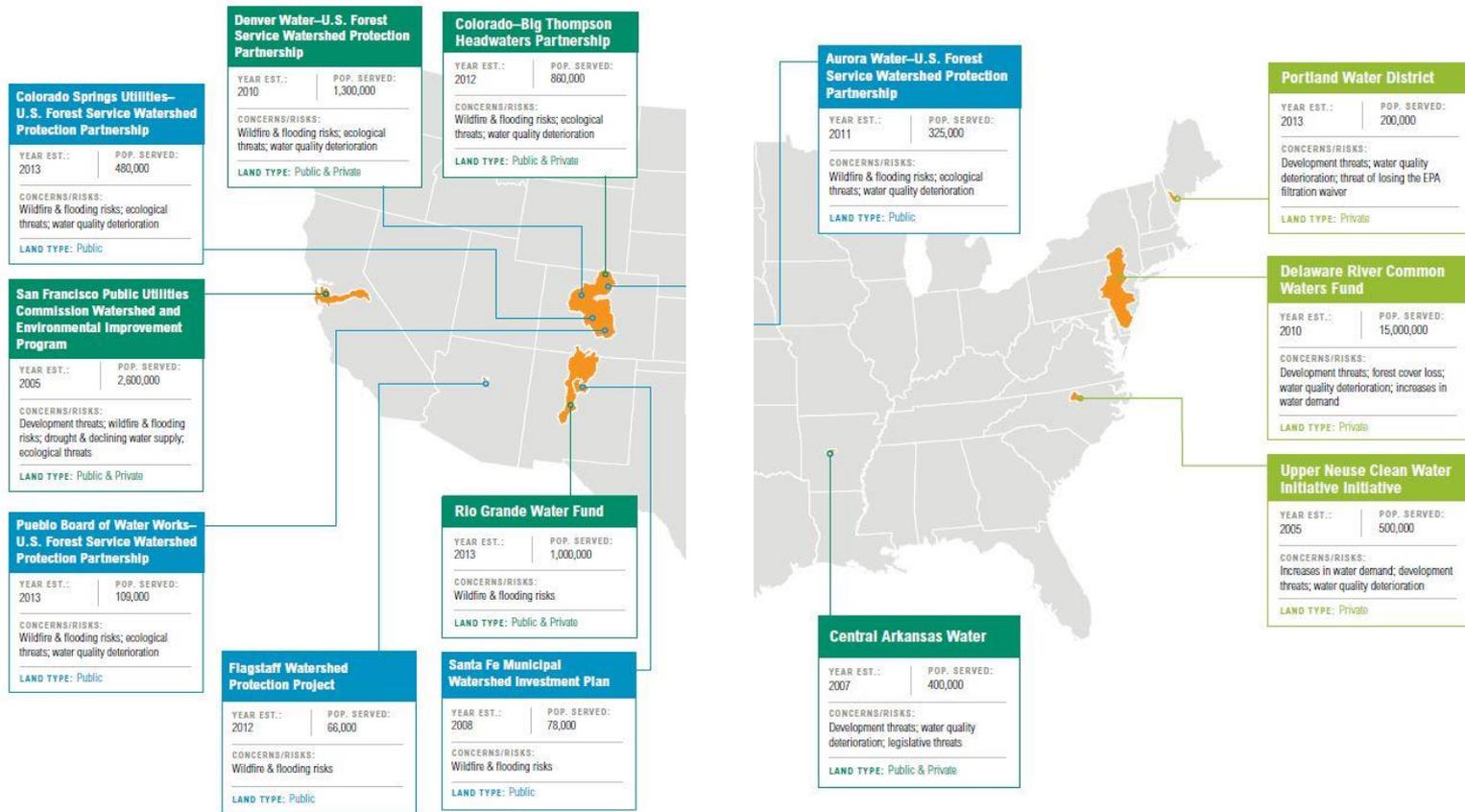


Watershed Agricultural Program Cont.

- 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



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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

Federal capitalization provides initial funding



States match federal capitalization grant (20 percent of capitalization)



Clean Water State Revolving Fund

Low interest loans
Loan repayments

Eligible CWSRF Projects



Bond repayments
Bond proceeds

Bond holders provide additional funding



www.epa.gov/cleanwatersrf

water.epa.gov/grants_funding/dwsrf



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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?

