

Veolia Water New York Programmatic Approach to Implementing PFAS Treatment in Rockland and Putnam Counties



June 9, 2023



NYWEA-NEWEA Joint Spring Technical
Conference and Exhibition

Agenda

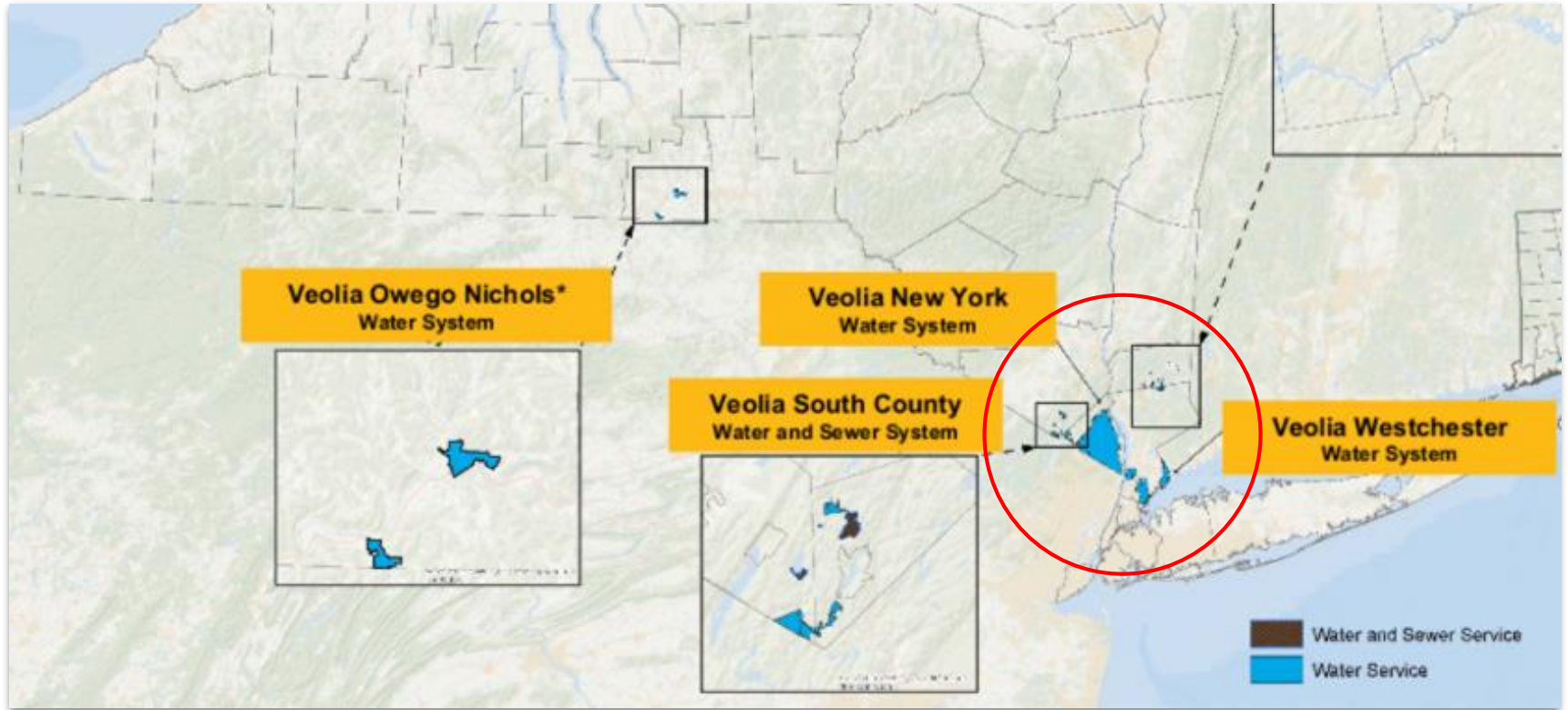
- **New York State PFAS Regulations and Compliance Schedule**
- **PFAS Program Objectives & Key Planning Drivers**
- **Look Before You Leap – PFAS program initial steps**
- **Project Delivery Method Selection**
- **Prepurchase of Equipment & Media**
- **VWNY Specific Examples, Challenges & Lessons**
- **EPA's NPDWR PFAS Rule – Path Forward**

NYS Regulations/Compliance Schedule

- **Issued August 26, 2020**
- **Maximum Contaminant Levels (MCLs)**
 - PFOA & PFOS both have MCLs of 10.0 ppt
 - NYS proposed PFAS6 regulation also considered
- **NYS Rule initially impacted 17 VVNY sites**
- **Aggressive Implementation Schedule**
 - With Deferral (Waiver) – 24 months
 - Extended Deferral – additional 12 months



VWNY Project Locations



PFAS Program Objectives and Drivers

OBJECTIVES:

- **Deliver high quality, reliable water in compliance with all applicable drinking water regulations.**
- **A balanced investment plan**
- **Transparent and proactive communication plan**

PFAS Program Objectives and Drivers

KEY PLANNING DRIVERS:

- **Project Prioritization**
- **Availability of Treatment Equipment**
- **Availability of Contractors**
- **Availability of Design Firms & Bench Testing Labs**

LOOK BEFORE YOU LEAP



Water Quality

- PFAS water quality review*
- Bench Testing / Piloting

Property and Permitting

- Property rights / restrictions
- Local planning board process and anticipated timelines

Data Gathering

- Existing treatment, operating parameters and challenges
- Source criticality and use
- Lot size, topography and ease of access
- Environmental constraints

By failing to prepare, you are preparing to fail. ~ Benjamin Franklin

*Review of EPA Method 537.1 data

LOOK BEFORE YOU LEAP

Water Quality: PFAS Sampling & Bench Testing



- **~100 Wells in 5 NY Counties**
 - (Orange, Putnam, Rockland, Tioga, Westchester)
- **Bench Testing:**
 - Water from sites sent to Laboratories for bench scale testing of GAC and Ion Exchange Media
 - Determine life expectancy of media
 - Determine most effective media
 - ***Selected GAC media for first 17 sites***

LOOK BEFORE YOU LEAP

Property, Permitting & Data Gathering



- Property Rights / Restrictions
- Local Planning Board Process and Anticipated Timelines
- Lot Size, Topography and Ease of Access
- Environmental Constraints
- Basic Operational Parameters
- Existing electrical supply capacity
- Other system improvements needed
- Consolidation of sources feasible?

Project Delivery Method Selection

- **Design, Bid, Build**
 - Effective if scope not well defined
 - If treatment technology is unknown
 - Property Right Issues
- **Fixed-Price Design / Build**
 - Effective with a well-defined scope / few unknowns
 - Expedited Design/Permitting and Construction Scheduled
 - Single Point of Contact
 - Fixed-price leads to innovation within performance criteria
- **Progressive Design/Build**
 - Subset of design/build
 - Contractor typically updates bid maximum price at ~60% design
 - Less risk transfer / higher control vs traditional design/build
 - Continuity of design & construction

Veolia PFAS Design Build RFP Procurement

- **Selected Design Build for initial 17 NY PFAS Projects**
- **Why Design Build (DB)**
 - Expedited Schedule vs Design-Bid-Build
 - Single point of contact
- **Veolia issued 7 Design Build (DB) RFPs**
 - 1-3 Sites per Procurement Package
 - Robust performance-based RFP requirements
 - Standard specifications and preferred equipment
 - Lump Sum Bid
 - Expedite Design and Construction Schedule
 - Permitting to Start Early on in Design Process
 - A balance between standardization vs. creativity

Key Design Build RFP Performance Standards

- Design, Planning and Permitting Milestones
- Meeting EBCT, flow and pressure requirement
- Match company-standardized instruments/SCADA
- Permit fees as pass through costs to expedite
- 30%, 60%, 90% design reviews
- Key construction milestones
- Routine project status meetings
- Owner-purchased equipment coordination
- Training of Veolia operations teams

Program Project Tracking, Meetings & Workshops

Project Tracking

- Tracking on stakeholder shared drive
- Establish detailed program/ project milestones and track progress
- Bi-weekly progress meetings
- Daily construction tailgate meetings

Workshops

- Program strategy
- Design Workshops
- Vendor Lunch & Learns
- Start-up & testing preparation
- Challenge / conflict resolution
- Personnel training workshop(s)
- Post-Mortem project evaluation



Owner-Procured Equipment & Media

- **Pre-purchase Treatment Vessels**
 - CDM Smith engaged to size Vessels and develop pre-purchase documents
 - A single procurement package to provide consistency of PFAS Treatment Vessels
 - Delivery schedule to match DB Contract Schedules
- **Pre-purchase Treatment Media**
 - Single supplier of NYSDOH approved media
 - Media delivery schedule and startup services tied to Construction contracts
- **Pre-Purchase of Electrical Equipment**
 - VFDs, MCCs, Pumps, etc.



PFAS Program Successes & Lessons Learned

Successes

- Early bench testing of potential sites
- Design Build delivery method
- Routine meetings and workshops
- Owner-purchase of vessels and media
- Standardization of controls and SCADA
- Project team understanding and dedication
- Sharing of best practices



PFAS Program Successes & Lessons Learned

Lessons Learned

- Address property right challenges before project delivery method selection
- Site access is significant challenge
- Planning and approvals process (> 1 year)
- Routine communication with stakeholders
- Commissioning (2+ weeks)
- Plan for temporary treatment solutions



EPA announcement

Legally Enforceable Levels Proposed for 6 PFAS compounds in drinking water

NPDWR proposed by EPA to establish **legally enforceable levels, called Maximum Contaminants Levels (MCLs)**, for 6 PFAS in drinking water

EPA is also proposing **health-based, non enforceable Maximum Contaminants Goals (MCLGs)** for these 6 PFAS

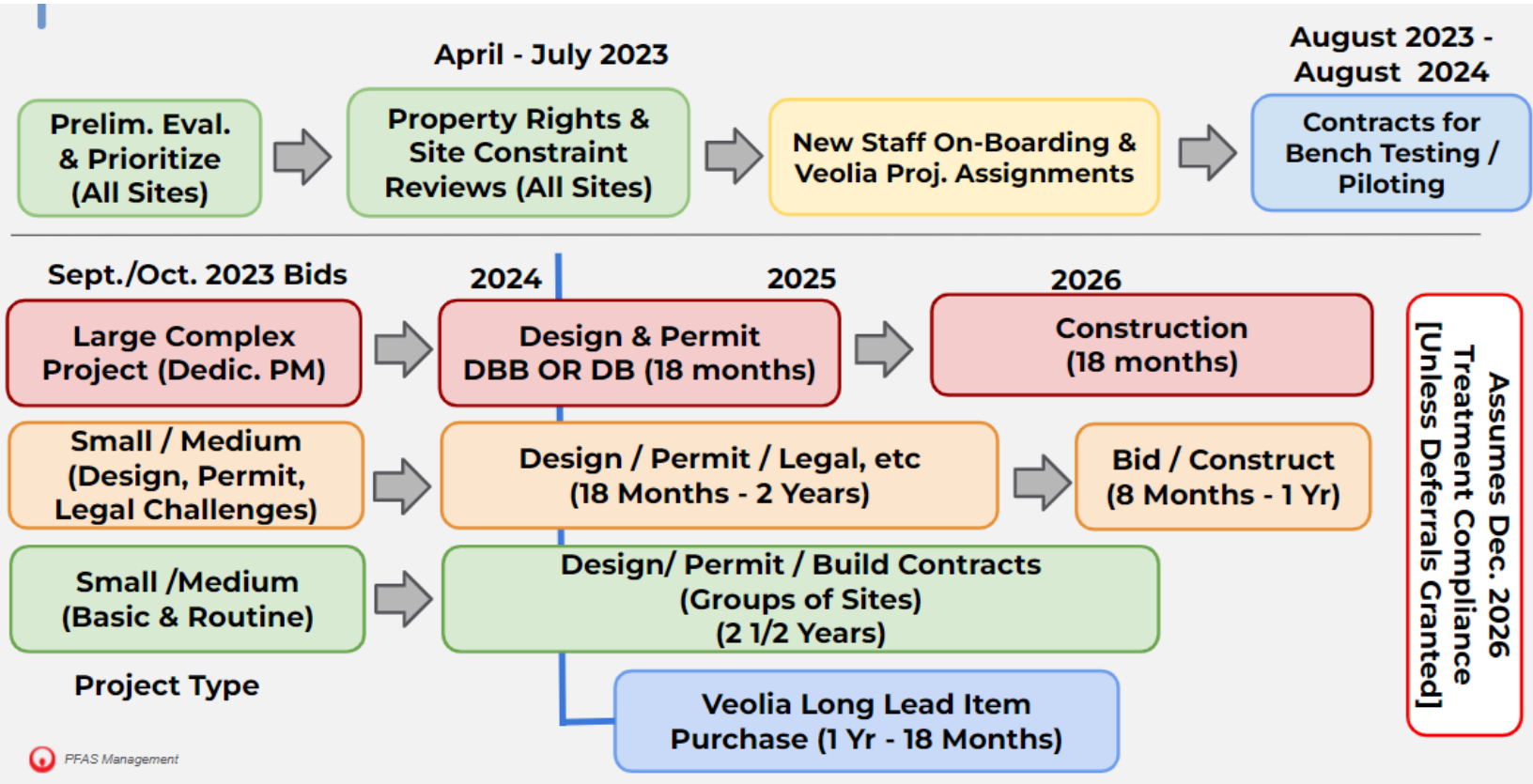
Compound	Proposed MCLG	Proposed MCL (enforceable levels)
PFOA	Zero	4.0 parts per trillion (also expressed as ng/L)
PFOS	Zero	4.0 ppt
PFNA	1.0 (unitless) Hazard Index*	1.0 (unitless) Hazard Index*
PFHxS		
PFBS		
HFPO-DA (commonly referred to as GenX)		

* The Hazard Index is a tool used to evaluate potential risks from exposure to chemical mixtures

First Look: Impact of Rule on Veolia's Regulated Utility

- **70+ potable water sources requiring PFAS treatment** across the US
 - 25+ additional PFAS project sites in NY State alone
- **Comprehensive communications strategy** with all stakeholders
- **Additional internal staff** likely required to support workload
- **Develop partnerships** with trusted vendors, consultants and contractors
- Requires **proven program management strategy** and project delivery method execution

Path Forward with New EPA Regulations



Thanks for your Time



Questions

