



Westchester Joint  
Water Works

# Rye Lake Water Filtration Plant

WJWW Board Meeting  
January 12, 2021



# Rye Lake Water Filtration Plant



## Treatment Selection

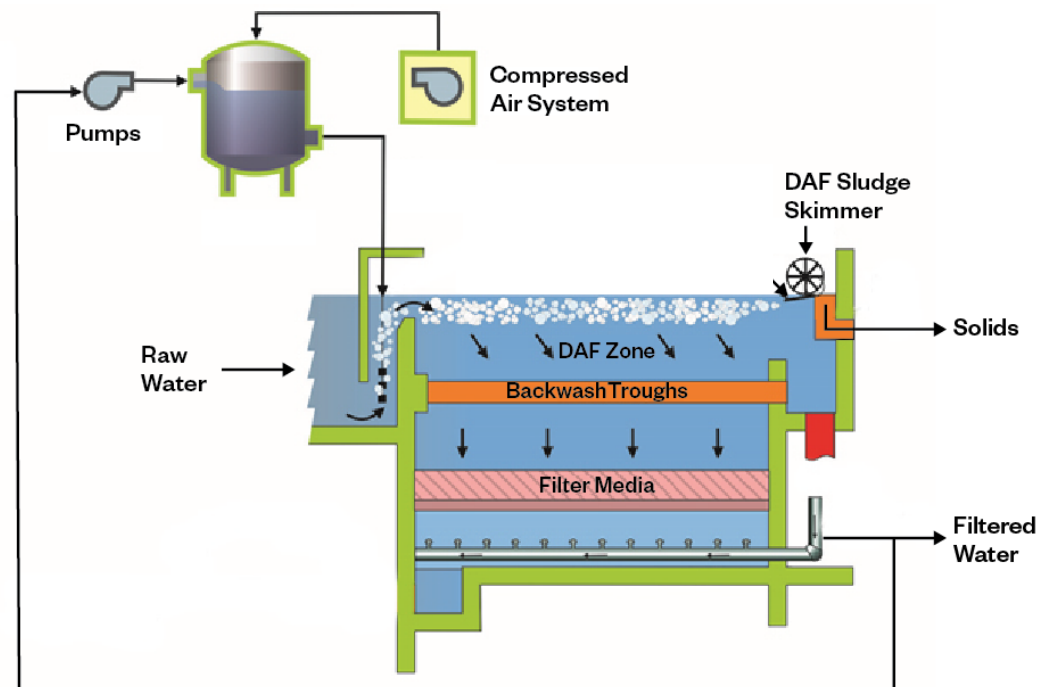
- Dissolved Air Flotation/Filtration (DAFF) treatment
- Used widely throughout the Northeast on similar water supplies

## Capacity

- 30 million gallons per day

## Building Size

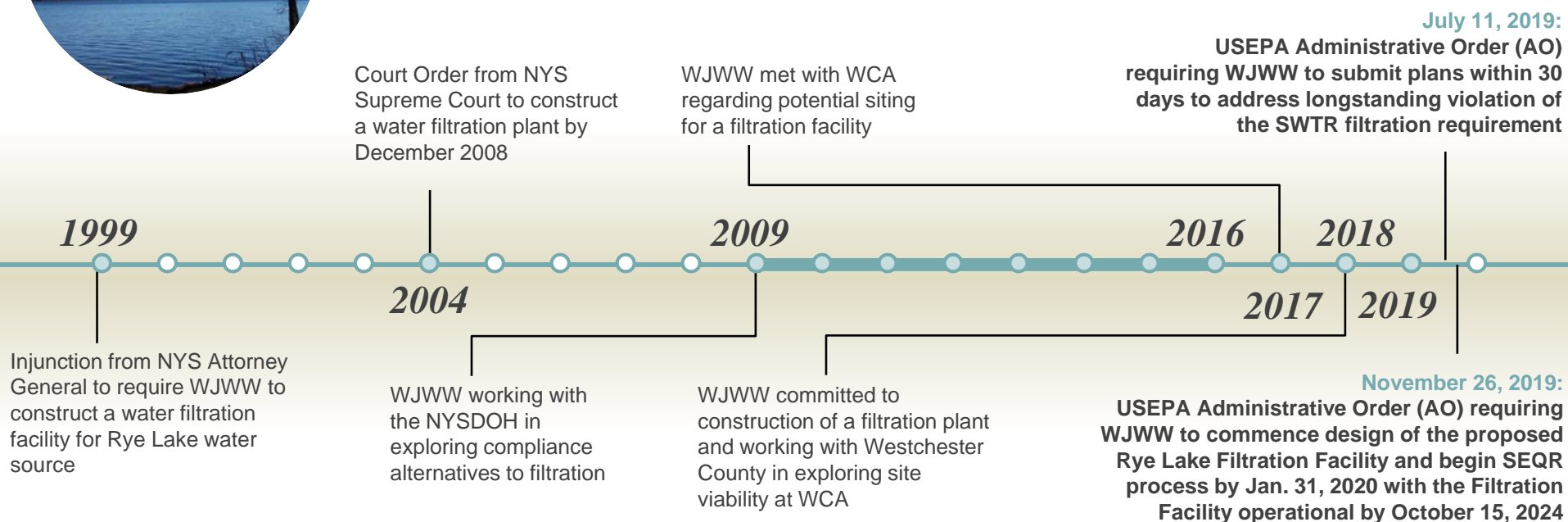
- Approximately 1 acre



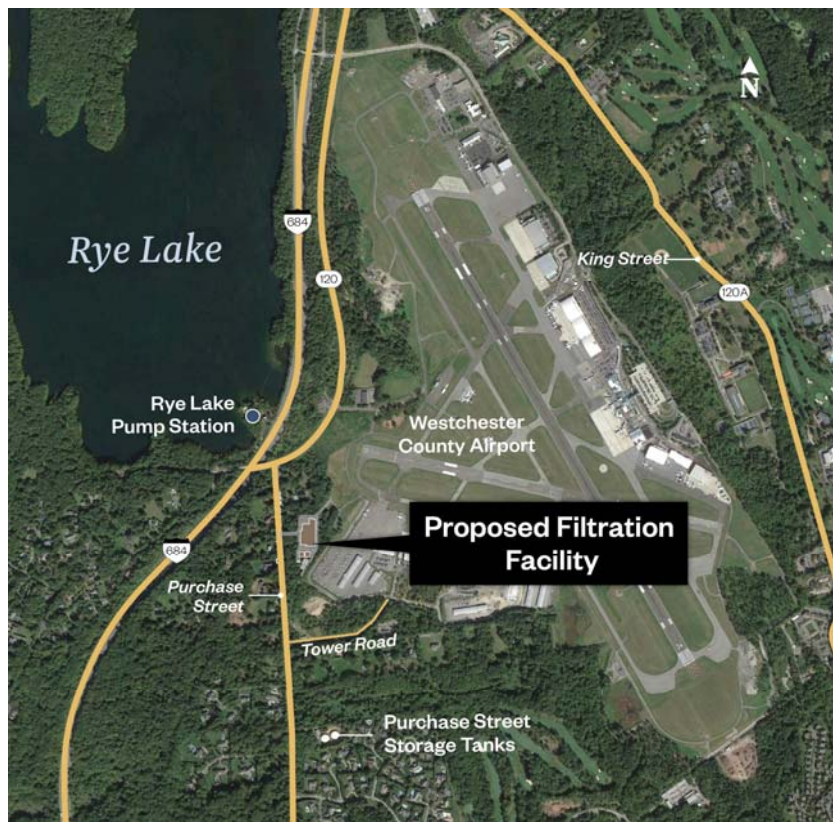
# Filtration Facility Background



## United States Environmental Protection Agency (USEPA) Surface Water Treatment Rule (SWTR) Filtration Requirement Compliance History



# Proposed Water Filtration Plant Site Plan





# Site Design Features



Purchase Street Entry: Preliminary Concept Images

- Create a site entry signature resonating with residential fabric
- Mitigate viewsheds of building beyond via landscape baffles
- Accommodate technical requirements of various vehicle types
- Maintain a secure and monitored primary entrance



Purchase Street Entry:  
Preliminary Concept Plan

# Initial Architectural Massing Studies



Previous Explorations



Selected Transverse Gable Massing

# Architectural Design

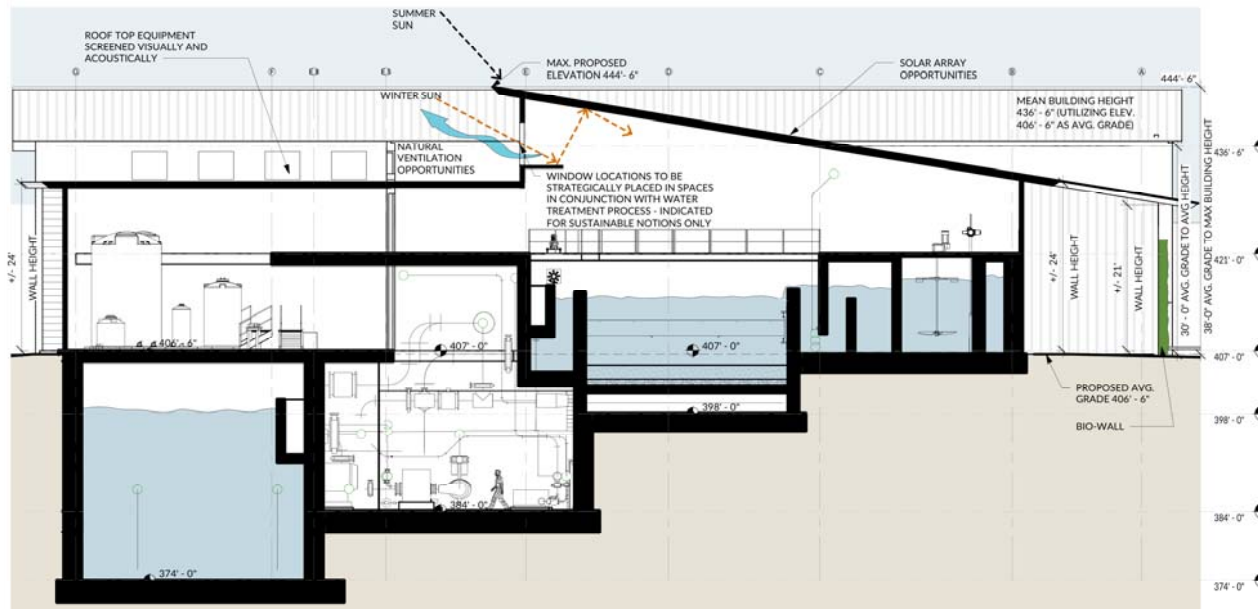


Selected Transverse Gable Massing

- Introduce rural forms creating scalable building elements and features
- Introduce practical roof form areas supporting sustainable means and methods
- Create a hierarchy of roof forms to visually and acoustically screen rooftop equipment
- Introduce a range of tactile exterior building elements and finishes



# Architectural Design



Preliminary conceptual building section

- Diverse set of building forms to mitigate sense of building volume and scale
- Introduce practical roof form areas supporting sustainable means and methods (Photovoltaic and use of natural daylighting)
- Create a hierarchy of roof forms to visually and acoustically screen rooftop equipment
- Vegetative feature opportunities as building design elements



# Architectural Materials



Exterior siding, roofing and cladding

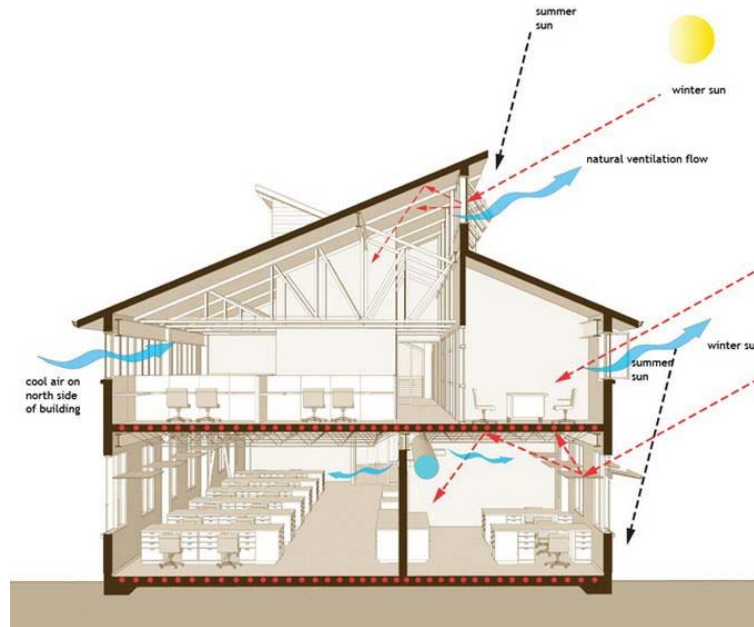


Current building material studies explore a range of solutions to embrace tactile surfaces lending to scale and rural architecture introduced as fresh design notions.

# Sustainable Means, Methods & Features



Photovoltaic PV



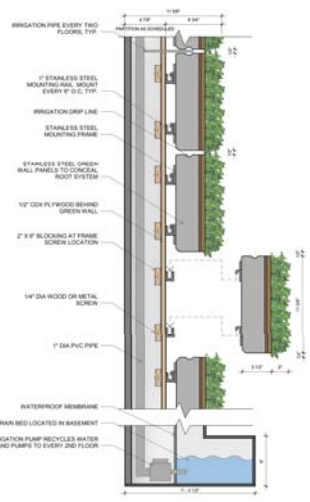
Use of Daylighting



Current building massing explores a range of solutions to provide opportunities for significant daylight gathering and large scale solar arrays



## Sustainable Means, Methods & Features



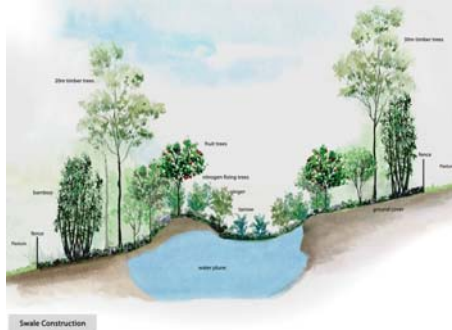
## 'Live Wall" or Bio-wall



## Site Screening



## Site Bioswales



Current building material studies explore a range of solutions to integrate vegetative features both as building and site elements. The vegetative or 'live green' opportunities can be utilized as performance and screening components.

# Approvals & Permits

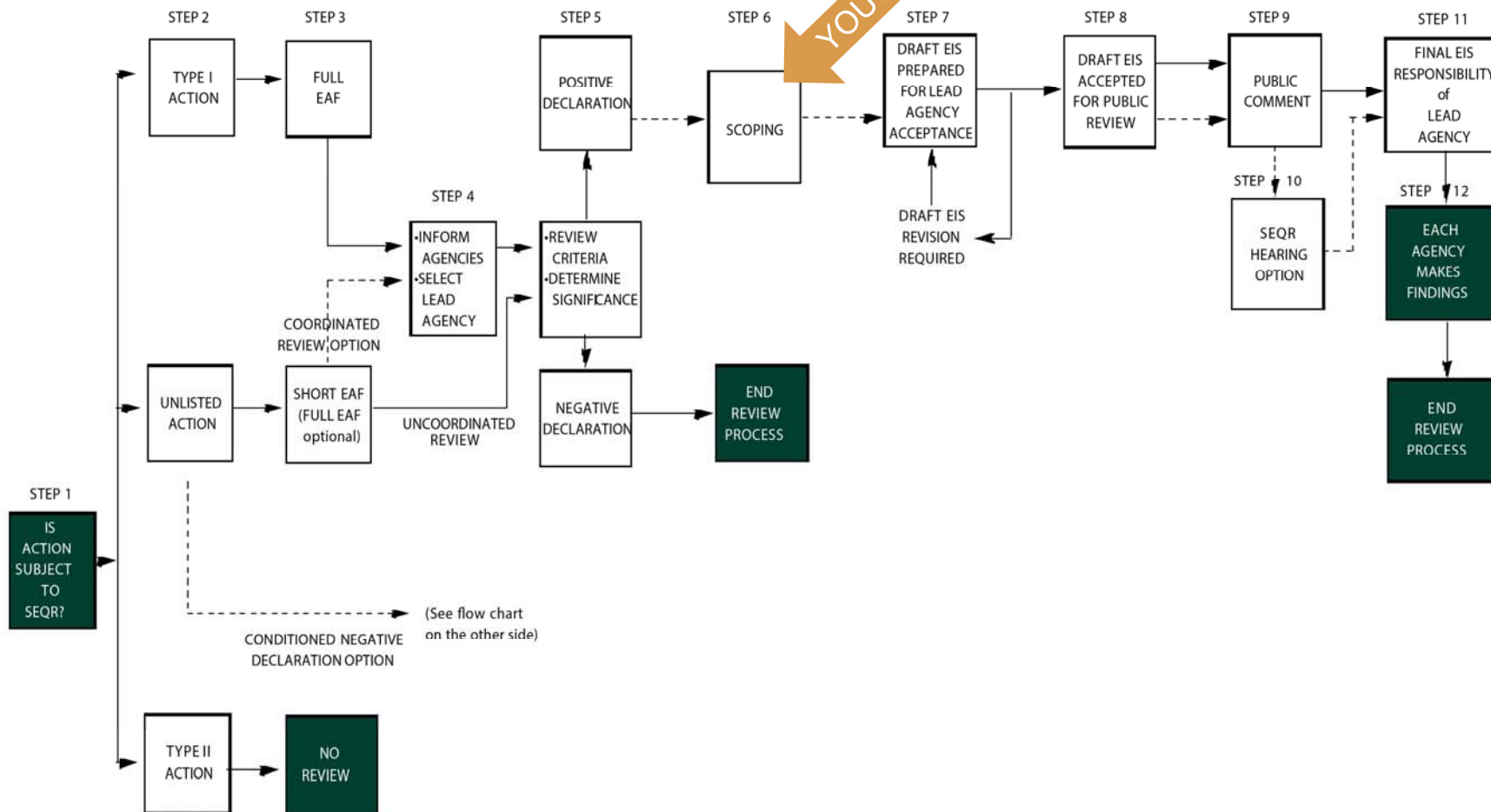


Agency	Permit/Approval
<b>US EPA</b>	<ul style="list-style-type: none"> <li>Compliance with Administrative Order</li> <li>WIFIA Program</li> </ul>
<b>USACOE</b>	<ul style="list-style-type: none"> <li>Wetlands / Section 404 Clean Water Act</li> </ul>
<b>US FWS</b>	<ul style="list-style-type: none"> <li>Endangered Species Consultation</li> </ul>
<b>FAA</b>	<ul style="list-style-type: none"> <li>Notice of Proposed Construction or Alteration</li> </ul>
<b>NYS DEC</b>	<ul style="list-style-type: none"> <li>SPDES General and Industrial</li> <li>Water Quality Certification</li> </ul>
<b>Enviro Facilities Corp / NYSDOH</b>	<ul style="list-style-type: none"> <li>Drinking Water State Fund Program</li> <li>Water Infrastructure Improvement Act Grant</li> </ul>
<b>NYS DOH</b>	<ul style="list-style-type: none"> <li>Compliance with Court Order</li> <li>Approval of Treatment Process and Plant Design &amp; Completed Works</li> </ul>
<b>NYS HPO</b>	<ul style="list-style-type: none"> <li>Historic Consultation</li> </ul>
<b>NYC DEP</b>	<ul style="list-style-type: none"> <li>Revocable Land Use Permit</li> </ul>
<b>Westchester County DOH</b>	<ul style="list-style-type: none"> <li>Approval of Completed Work</li> </ul>

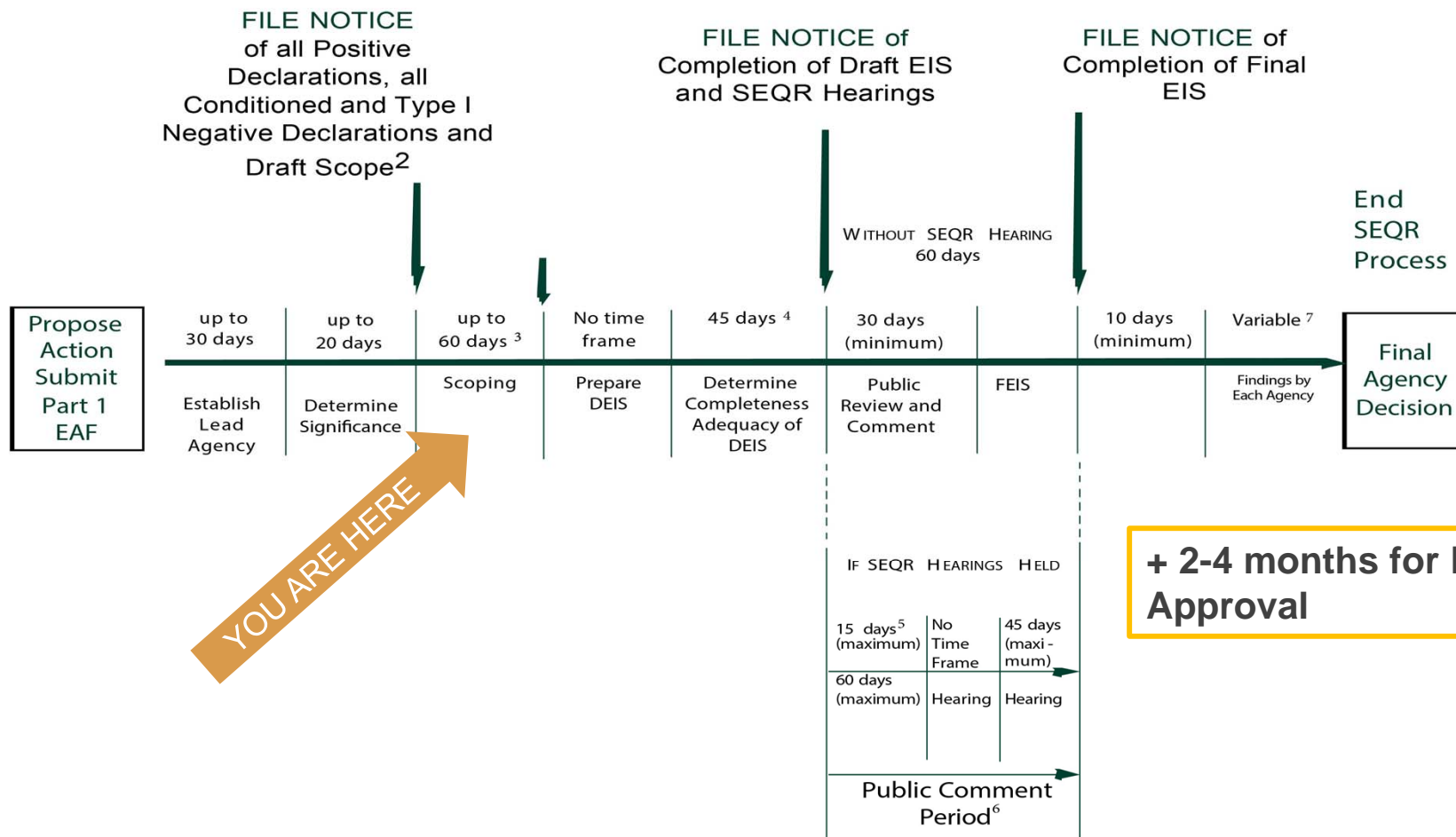
Agency	Permit/Approval
<b>Westchester County Board of Legislators</b>	<ul style="list-style-type: none"> <li>Approvals for obtaining property rights and sewer easements</li> </ul>
<b>Westchester DPW</b>	<ul style="list-style-type: none"> <li>Building Approvals and Road Permits</li> </ul>
<b>County Department of Environmental Facilities</b>	<ul style="list-style-type: none"> <li>Sewer Connection Approval</li> </ul>
<b>Westchester County Planning Board</b>	<ul style="list-style-type: none"> <li>Administrative Review</li> </ul>
<b>Town &amp; Village of Mamaroneck, Town/Village of Harrison Town Boards</b>	<ul style="list-style-type: none"> <li>Funding Approval</li> </ul>
<b>Town/Village of Harrison Planning Board</b>	<ul style="list-style-type: none"> <li>Freshwater Wetlands Permit</li> <li>Site Plan Approval</li> </ul>
<b>Town/Village of Harrison Town Board</b>	<ul style="list-style-type: none"> <li>Special Exception Use Permit</li> </ul>
<b>Town/Village of Harrison Architectural Review Board</b>	<ul style="list-style-type: none"> <li>Architecture Approval</li> </ul>
<b>Town/Village of Harrison Building Department</b>	<ul style="list-style-type: none"> <li>Building Permit</li> <li>Tree Removal Permit</li> </ul>
<b>Town/Village of Harrison Building Department</b>	<ul style="list-style-type: none"> <li>Land Disturbance Approval</li> <li>Sewer Hookup</li> </ul>



# SEQRA Process



# SEQRA Timeline



**+ 2-4 months for Planning Board Approval**

## SEQR Technical Team

**Hazen**



**B. LAING  SSOCIATES**



**NELSON POPE VOORHIS**  
*environmental • land use • planning*

**Kimley»Horn**

## EIS Scope- Analyses

### Existing Conditions, Potential Impacts & Mitigation Measures:

- Land Use, Zoning & Public Policy,
- Community Character & Visual Impacts
- Fiscal & Economic Impacts
- Community Services
- Utilities
- Stormwater
- Geology, Soils & Topography
- Vegetation & Wildlife
- Wetlands, Waterbodies, Watercourses & Floodplains
- Archeological & Historical Resources
- Traffic & Transportation
- Noise
- Air
- Public Health
- Construction





# EIS Scope- Alternatives

## **Alternative #1**

- No Action- Discusses the scenario where the status of existing land use remains unchanged

## **Alternative #2**

- Alternative Site Plan- Discuss the option of building the plant on the WJWW property which is part of the land swap in the proposed action

## **Alternative #3**

- Alternative Filtration Technology - Discuss the potential of meeting the EPA Administrative Order, Judgment and Order of New York State Supreme Court, and current federal drinking water standards through another technology other than what is proposed in the Proposed Action

## **Alternative #4**

- Alternative Façade Treatments