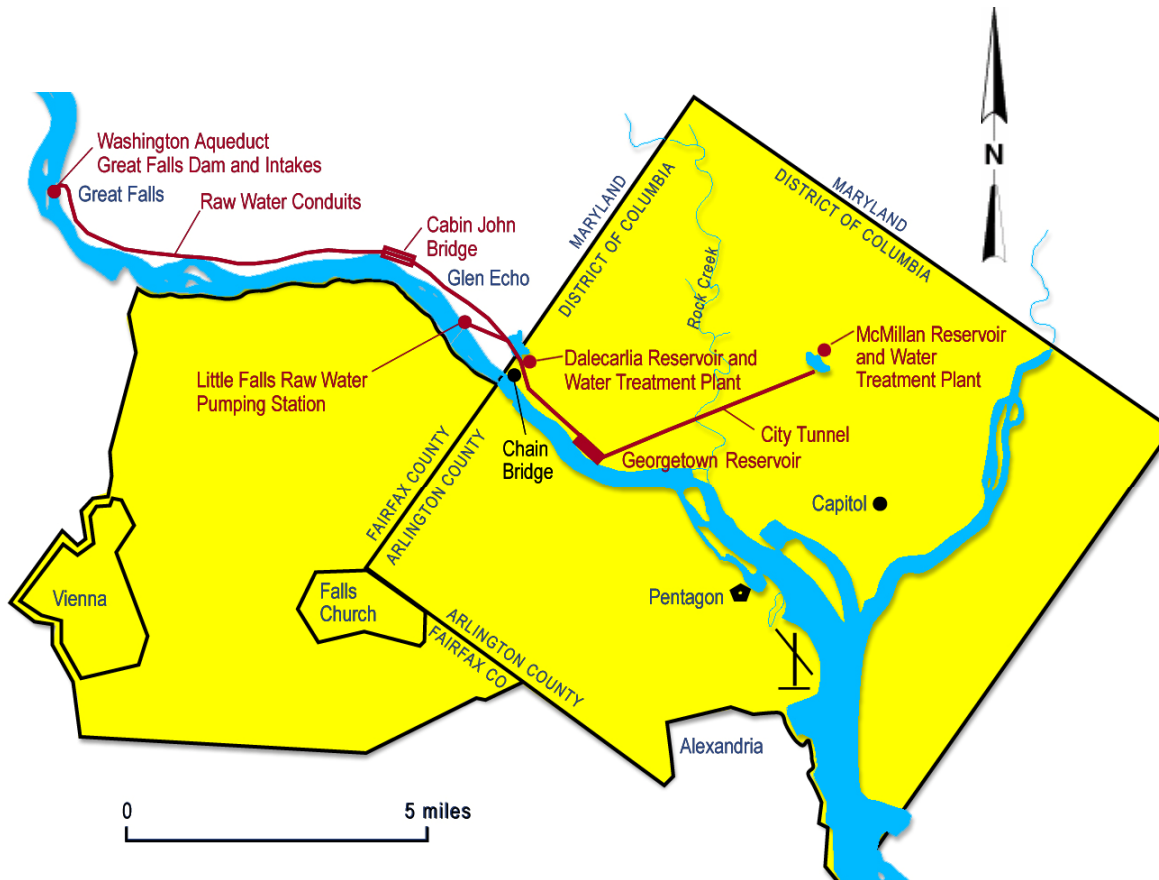
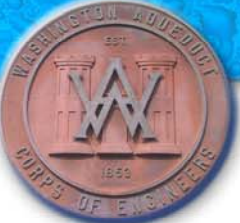




# Washington Aqueduct Has Been Producing Drinking Water for Approximately 1 Million Customers Since 1863

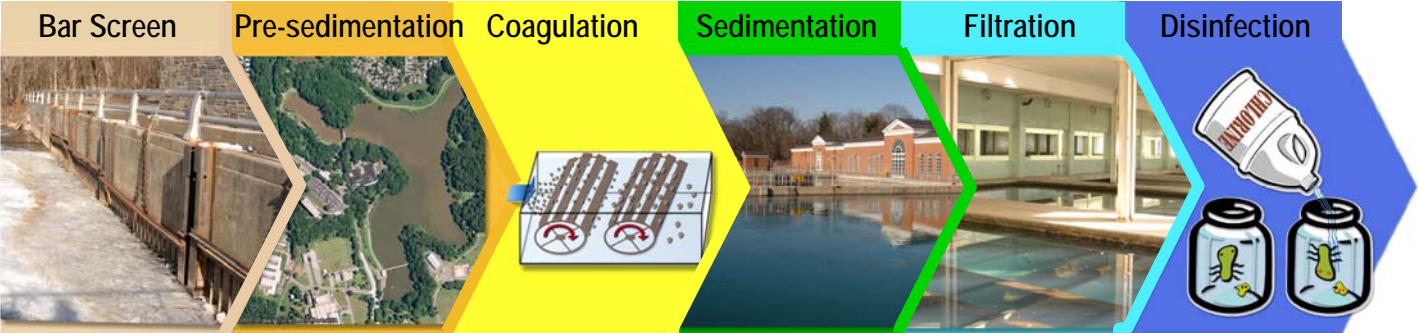


- 💧 **Washington Aqueduct produces drinking water for 1 million citizens in Washington, DC and Northern Virginia**
- 💧 **320 million gallons per day of water can be produced at two treatment plants located in the District of Columbia**

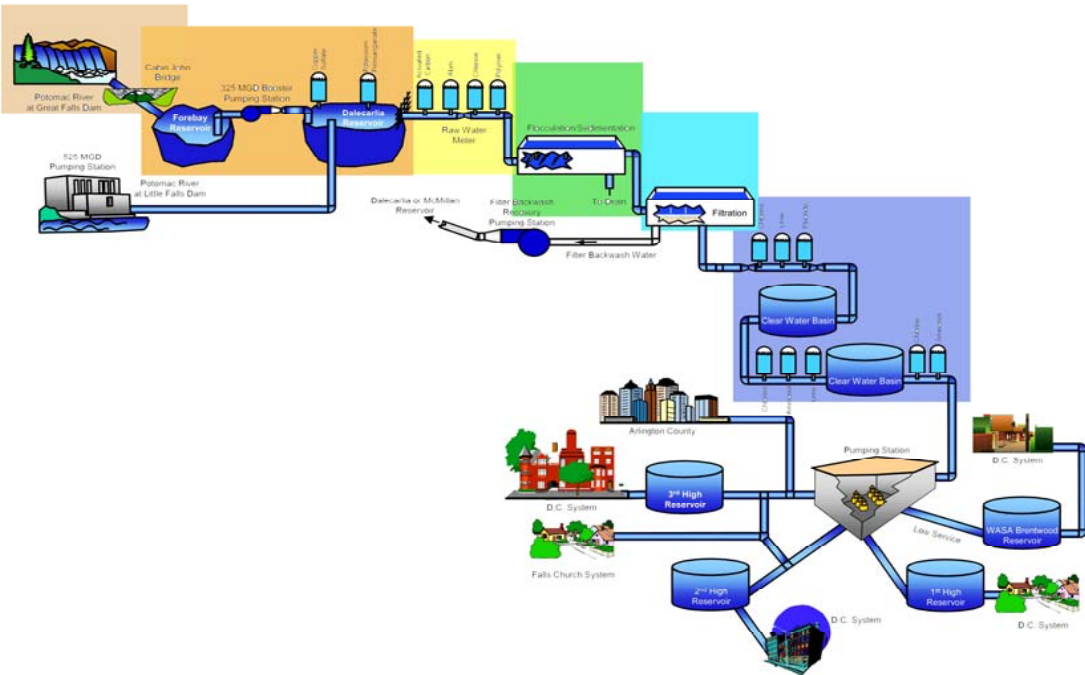


# From the Potomac River to Your Tap: Water Treatment Process Overview

**Six Essential Steps to Producing Drinking Water:**

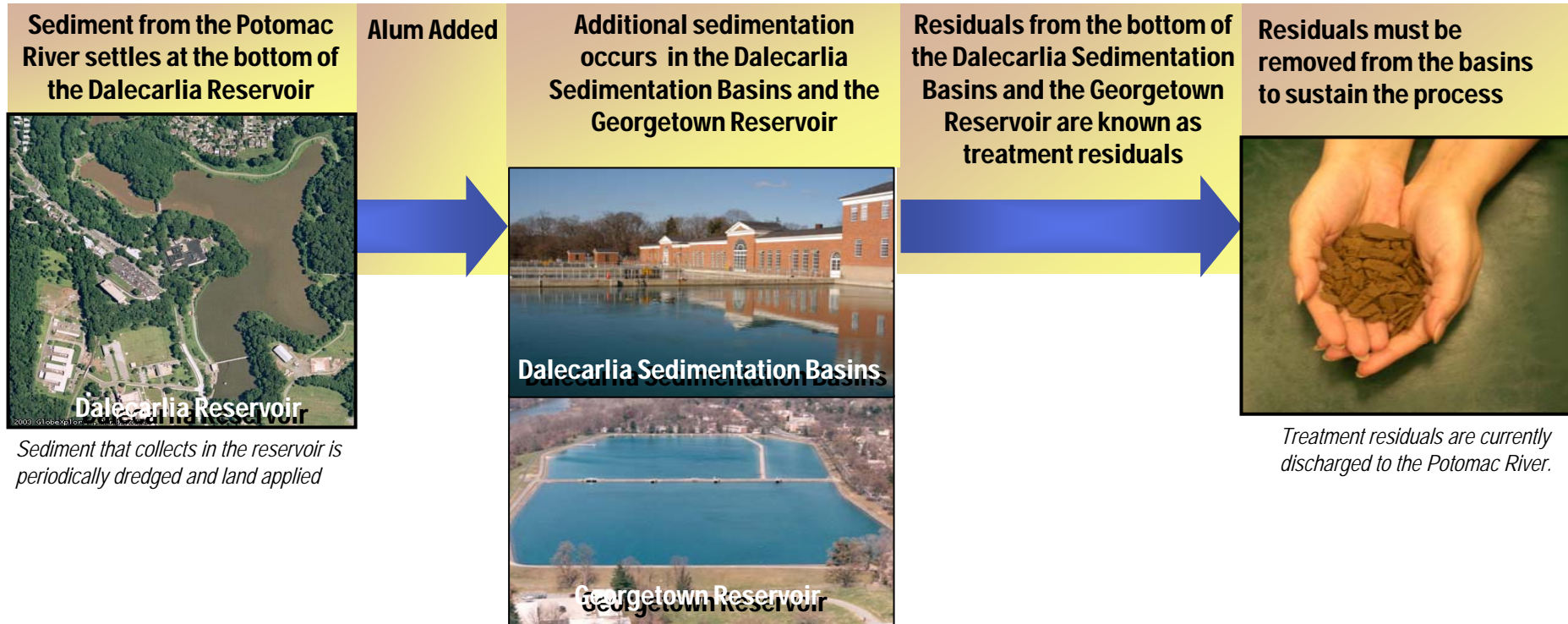


**Washington Aqueduct Water Treatment Process:**





# Washington Aqueduct Must Significantly Reduce or Eliminate Disposal of Treatment Residuals to the River



- 💧 All drinking water facilities treating surface water produce residuals.
- 💧 Washington Aqueduct must comply with NPDES Permit DC0000019 by the end of 2009.
- 💧 Washington Aqueduct must develop a new residuals management process to meet the new effluent standards in the permit.





# **All federal agencies must follow a specific process to pursue an undertaking that involves federal land, federal money or a federal permit**

- ◆ **National Environmental Policy Act (NEPA) mandates a full and objective analysis of the potential implications to the environment**
  - ❖ Multi-disciplinary evaluation
  - ❖ Includes natural and human environment

## **NEPA is a Structured Process**

- ◆ **Consult with Other Agencies**
  - ❖ ...consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved
- ◆ **Solicit participation of public and other stakeholders**
  - ❖ Scoping & public comment on Draft EIS
- ◆ **NEPA does not mandate selection of the environmentally preferred alternative**





# Through an Environmental Impact Statement All Alternatives are Screened and Reasonable and Feasible Alternatives Are Carefully Evaluated









**Possible alternatives for residuals management**



**Project Purpose and Need**

**Only alternatives meeting the project's purpose and need are evaluated in detail in the Draft EIS**

**Screening criteria include:**

-  Meets the FFCA\* schedule
-  Preserves reliability and redundancy of the system
-  Uses design and processes proven in the water treatment industry
-  Complies with NPDES Permit DC0000019
-  Considers economic effects
-  Avoids undue impairment of jurisdictional wetlands
-  Conforms with ESA\*\*
-  Avoids significant alteration of important cultural resources

\* Federal Facilities Compliance Agreement

\*\* Endangered Species Act



## Washington Aqueduct NPDES Draft EIS Alternatives

| Alternative              | Thickening/<br>Dewatering  | Disposal   |
|--------------------------|--|--|
| <b>A</b>                 | <b>Northwest Dalecarlia<br/>Processing Site</b>  | <b>On-Site<br/>Monofill</b>  |
| <b>B</b>                 | <b>Northwest Dalecarlia<br/>Processing Site</b>  | <b>Off-Site<br/>Trucking</b>   |
| <b>C</b>                 | <b>Thickening at Northwest<br/>Dalecarlia Processing Site;<br/>Dewatering at Blue Plains AWWTP</b> | <b>Pipe to Blue Plains AWWTP;<br/>Truck Dewatered Residuals from<br/>Blue Plains AWWTP</b> |
| <b>D<br/>(No Action)</b> | <b>N/A</b>   | <b>N/A</b>   |
| <b>E</b>                 | <b>East Dalecarlia<br/>Processing Site</b>   | <b>Off-Site<br/>Trucking</b>   |

**Note: All alternatives except No Action include water treatment residuals collection at four Dalecarlia sedimentation basins, two Georgetown Reservoir basins and optional Forebay improvements.**



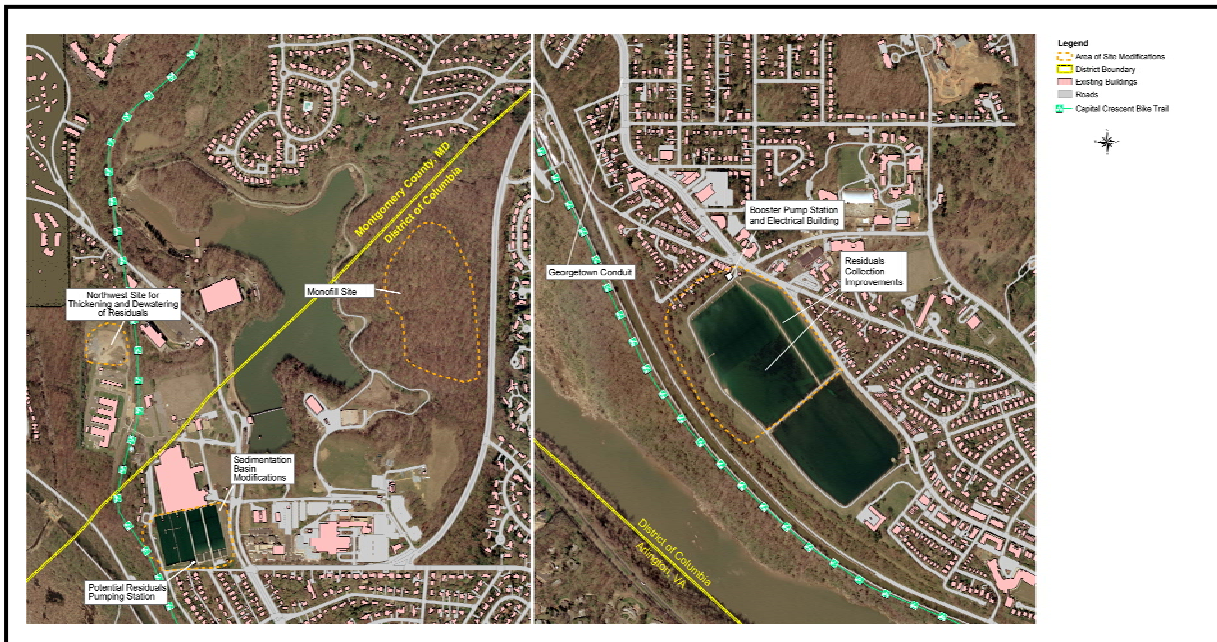


# Alternative A : Dewatering and Disposal by Monofill

## Alternative Components

- ♦ Thickening /Dewatering Facility at Northwest Dalecarlia processing site
- ♦ Disposal on-site by Monofill
- ♦ Collection at four Dalecarlia sedimentation basins and two Georgetown Reservoir basins

This Alternative Cannot Be Recommended



Residuals Facilities  
Located at Dalecarlia  
WTP, Dalecarlia  
Reservoir  
and Georgetown  
Reservoir





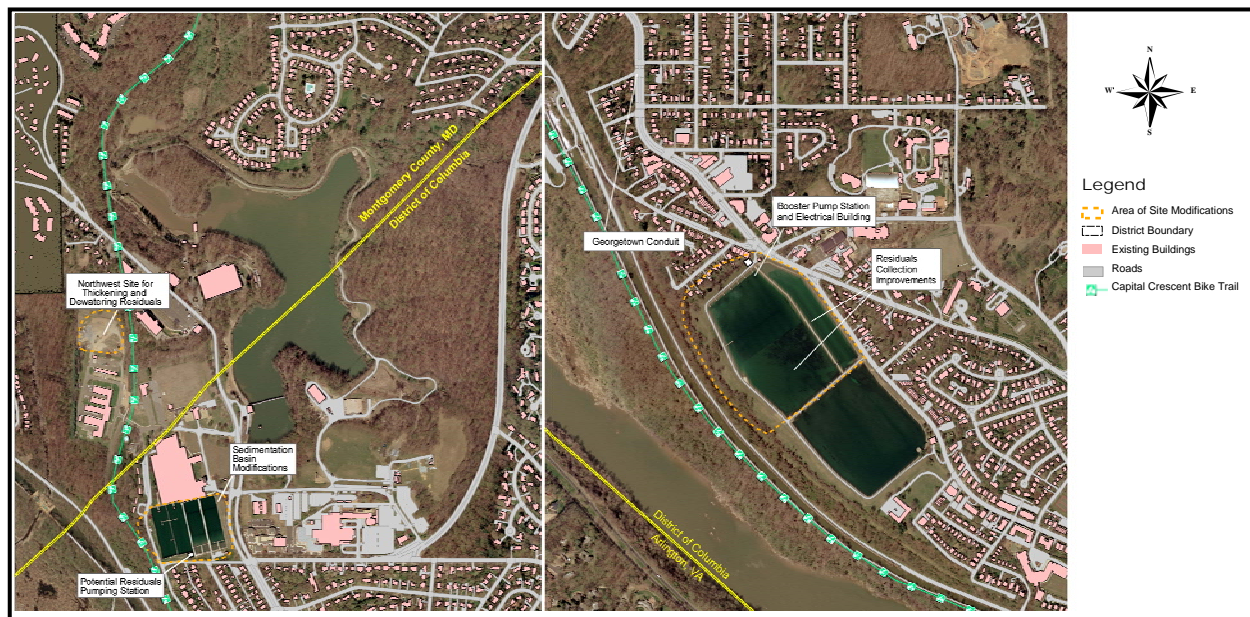
# Alternative B: Dewatering at Northwest Dalecarlia Processing Site and Disposal by Trucking

## Alternative Components

- Thickening / Dewatering Facility at Northwest Dalecarlia processing site
- Disposal off-site by trucking
- Collection at four Dalecarlia sedimentation basins and two Georgetown Reservoir basins



*Simulation of proposed Northwest Dalecarlia processing site (view from Capital Crescent Trail).*



**Residuals Facilities  
Located at Dalecarlia  
WTP and Georgetown  
Reservoir**

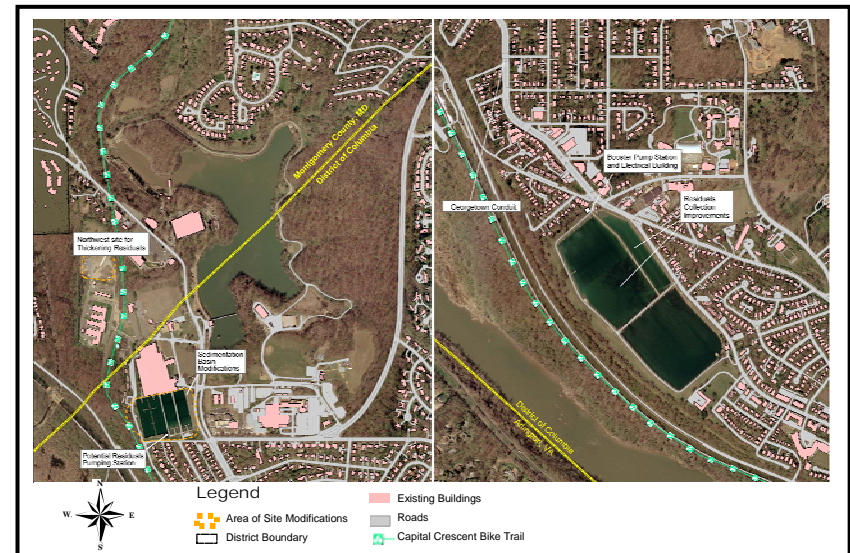
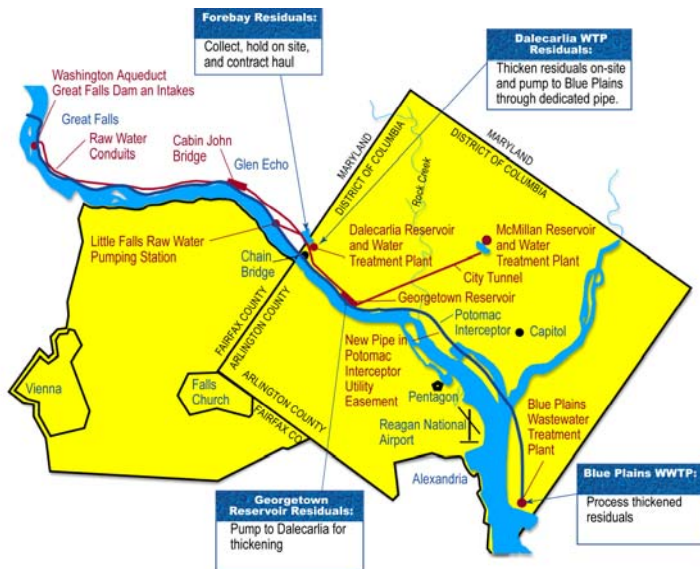


# Alternative C: Thickening and Piping to Blue Plains AWWTP

## Alternative Components

- Thickening at Northwest Dalecarlia Processing Site
- Conveyance by Pipeline to Blue Plains AWWTP
- Dewatering at Blue Plains AWWTP
- Disposal off-site by trucking
- Collection at four Dalecarlia sedimentation basins and two Georgetown reservoir basins

This Alternative Cannot Be Recommended



Facilities at Dalecarlia WTP, Georgetown Reservoir and Blue Plains AWWTP





## Alternative D: No Action Alternative

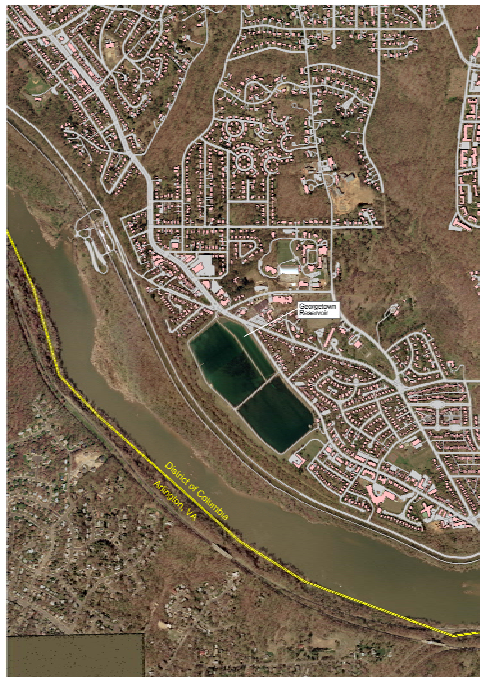
Existing Dalecarlia WTP  
Facilities



- Legend
- District Boundary
  - Existing Buildings
  - Roads



Existing Georgetown  
Reservoir Facilities



- Legend
- District Boundary
  - Existing Buildings
  - Roads



This  
Alternative  
Cannot Be  
Recommended

## Alternative Components

- ◆ No new components would be required for this alternative.
- ◆ Residuals would continue to be discharged from the Dalecarlia sedimentation basins and the Georgetown Reservoir to the Potomac River.
- ◆ This alternative does not meet the purpose and need of the project and would cause noncompliance with the Clean Water Act





# Alternative E: Dewatering at East Dalecarlia Processing Site and Disposal by Trucking

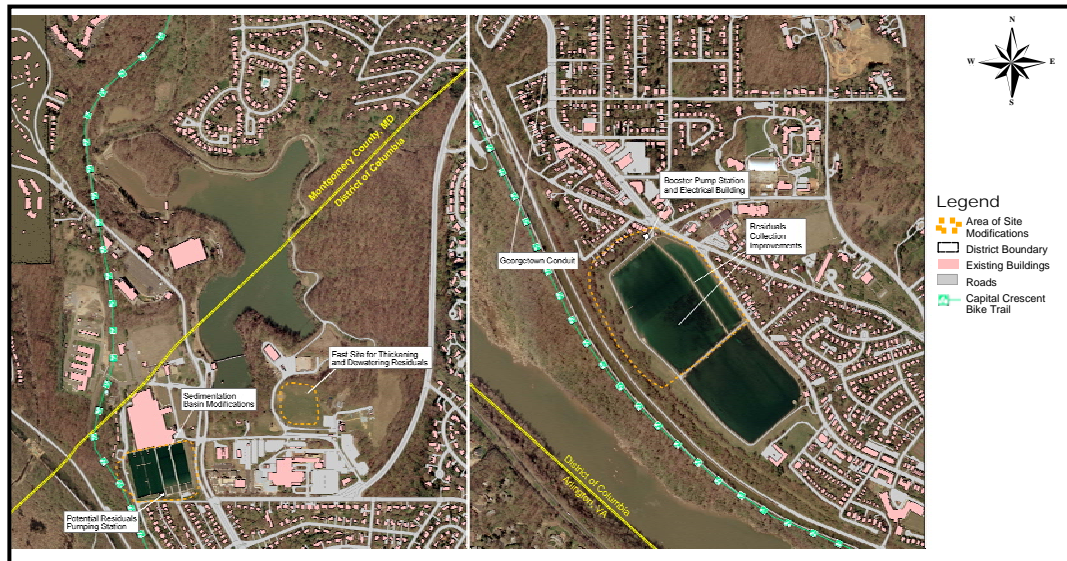
## Alternative Components

- ♦ Thickening/Dewatering Facility at East Dalecarlia processing site
- ♦ Disposal by trucking
- ♦ Collection from four Dalecarlia sedimentation basins and two Georgetown reservoir basins

Recommended Alternative

Residuals processing facilities are positioned on Washington Aqueduct property adjacent to Sibley Hospital and away from residences

No tree clearing is required for this alternative



Residuals Facilities Located at Dalecarlia WTP and Georgetown Reservoir



## Recommended Alternative – Alternative E Thickening/Dewatering at Dalecarlia Eastern Site

**Thickening /Dewatering  
Facility Simulations**

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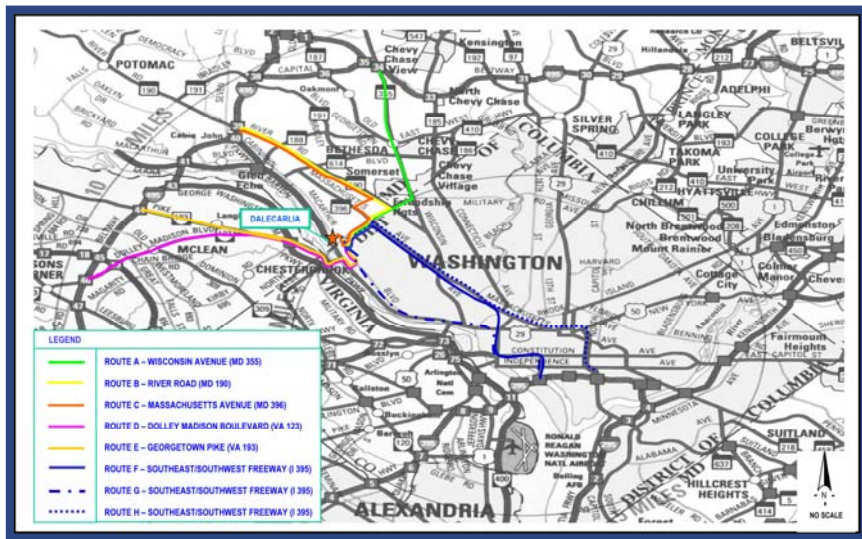
# Recommended Alternative – Alternative E Disposal by Off-Site Trucking

**Frequency of truck trips  
(heavily influenced by rainfall  
related river silt content)**



**Local Truck Routes Near Dalecarlia Studied in DEIS**

| Type of Year | Frequency of Occurrence            | Anticipated Truck Trips/Day (5 days/week) |
|--------------|------------------------------------|---|
| Average<br>↓ | Yearly average                     | 8 (typical year)                          |
|              | One month per year                 | 13 (typical year)                         |
| Wet<br>↓     | Yearly average (2 out of 11 years) | 11  |
|              | Two months in 11 years             | 17  |
|              | Two weeks in 11 years              | 33 (very infrequent)                      |



**Regional Truck Routes Studied in DEIS**





# Recommended Alternative – Alternative E Continuous Dredging at Georgetown Reservoir and Sedimentation Basin Modifications at Dalecarlia

## Georgetown Reservoir Improvements

- Residuals collection by electric powered dredge
- Booster pump station and electrical building

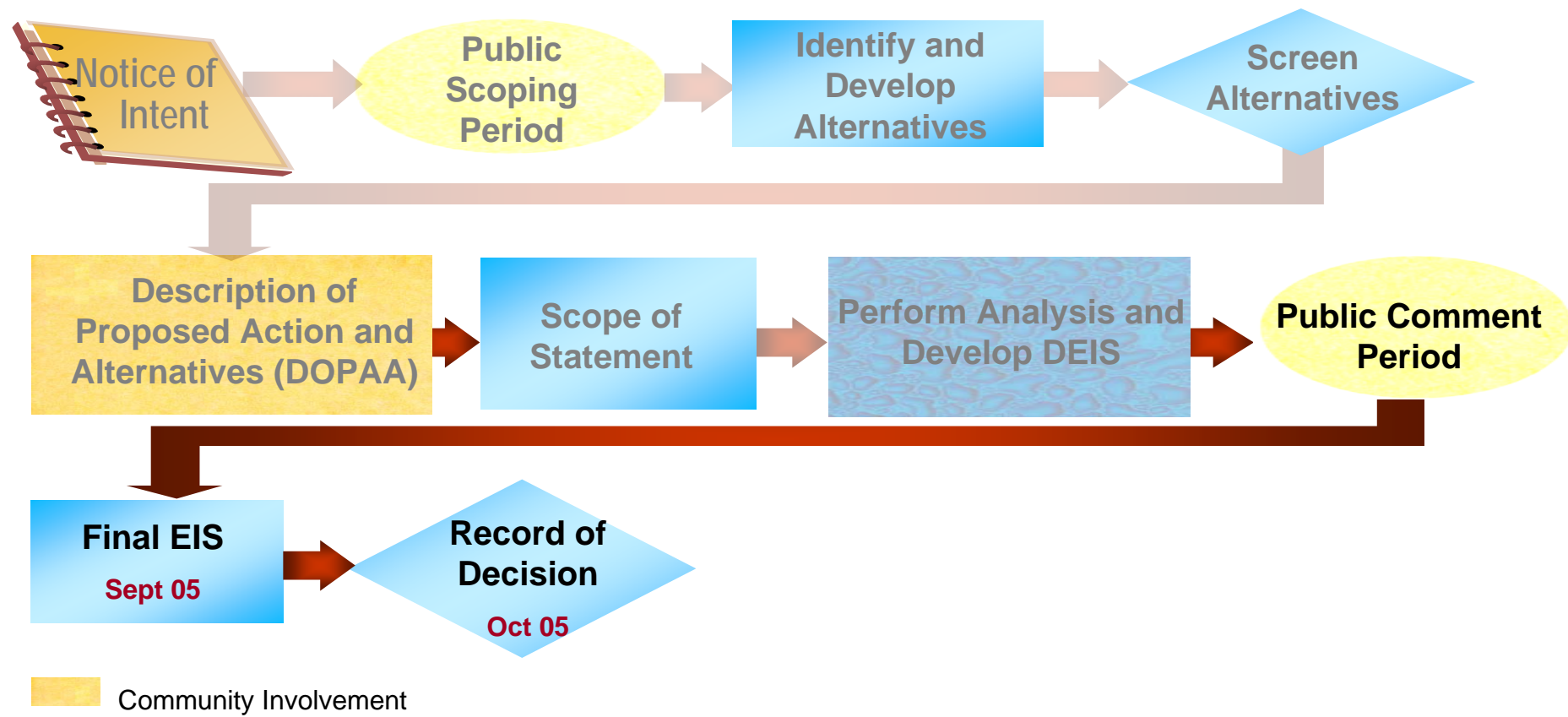


## Dalecarlia Sedimentation Basins Improvements

- Residuals collection (within basins, not visible)
- Small underground booster pump station



# The Environmental Impact Statement – What Happens Next







**Thank You For Your Interest**

**For additional information, or to speak to a study team member, visit the Workshop Portion of this evening's public hearing downstairs in the Vestry**

**To make private testimony, proceed downstairs to the Fireplace Room, adjacent to the Vestry**