



2021 Sanitary Sewer Master Plan Update

Master Plan Amendment #2021-00008

Planning Commission

November 4, 2021

What is the Sanitary Sewer Master Plan?

- Sanitary Sewer Master Plan (first adopted in 2013) is a chapter to the City's Master Plan
- Planning level document to address existing sanitary sewer needs and future needs to accommodate development in the City
- Being updated to account for:
 - ✓ Updated growth/development forecasts
 - ✓ Updated assessment of sanitary sewer needs (existing and development driven)
 - ✓ Changes in regulatory requirements
 - ✓ Review of sanitary funding

Sewer Master Plan Objectives

- Understand How the System Works
- Analyze Impacts of Growth
 - Sewer System Capacity
 - Identify System Improvements
- Discuss Ongoing and Future Wet Weather Mitigation Strategies
- Perform Sanitary Fee Studies and Provide Recommendations

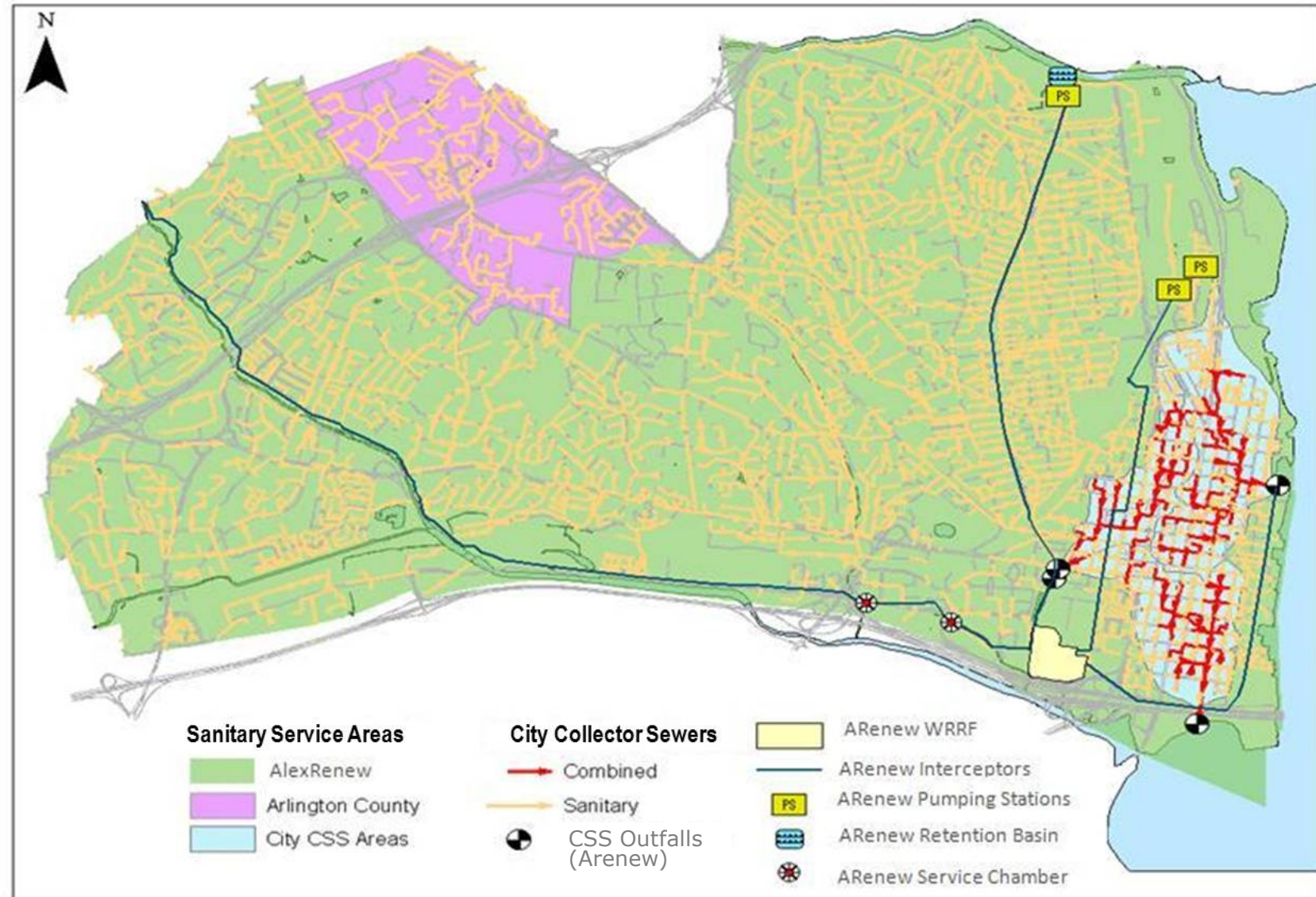
System Overview

City:

>240 miles of sanitary and combined sewers
- 60 miles rehabilitated

AlexRenew:

Wastewater Treatment Facility
Interceptor Sewers
Pumping Stations
Combined Sewer Outfalls (RiverRenew Project)



Sewer Capacity Needs

Wastewater Treatment Capacity (AlexRenew)

- Build-out need: 4 million gallons per day wastewater treatment
- Timing of need: Between 2040-2045
- No additional need at Arlington County

Interceptor Sewer Capacity (AlexRenew)

- Upper Holmes Run Trunk Sewer
 - Future improvements to be shared between City and Fairfax County (joint use sewer)
- Potomac Yard Trunk Sewer
 - Developer: all sewer improvements within Potomac Yard area
 - City: lower trunk sewer capacity improvements

Collection System Capacity (City)

- City: Existing sewer capacity improvements
- Developers: Growth-related capacity improvements
 - Existing policies require developers to provide for these

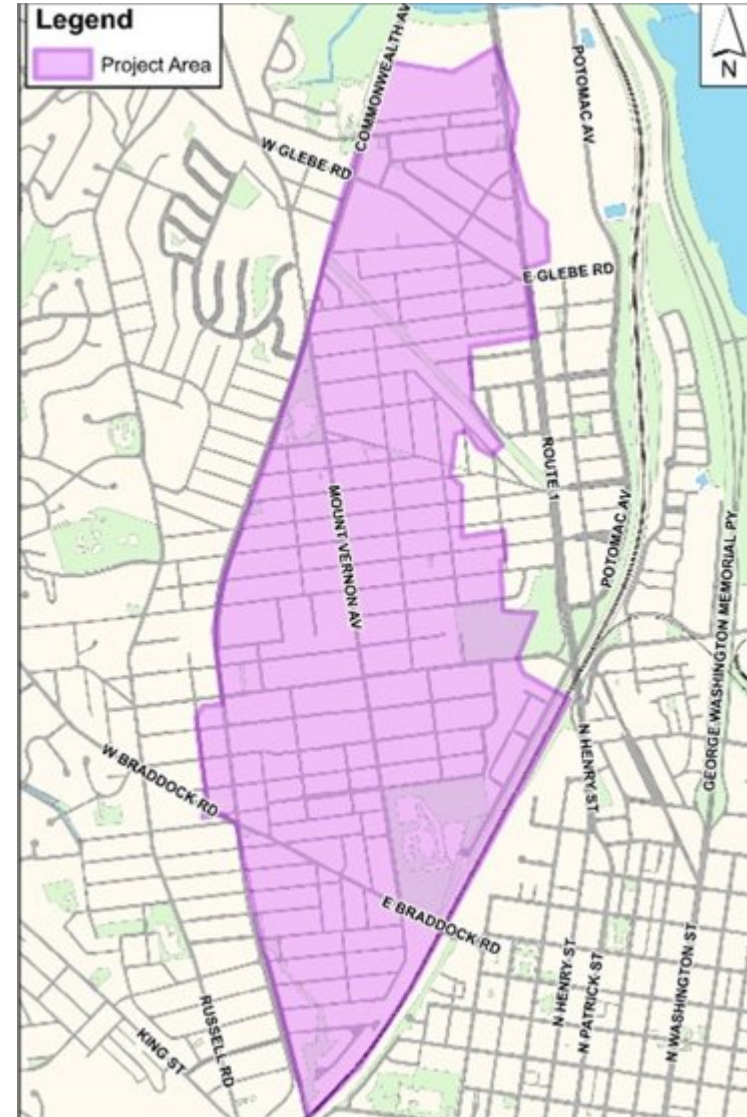
Wet Weather Mitigation Strategies

Sanitary
Sewer
Asset
Renewal
Program

Sewer
Capacity
Upsizing
Projects

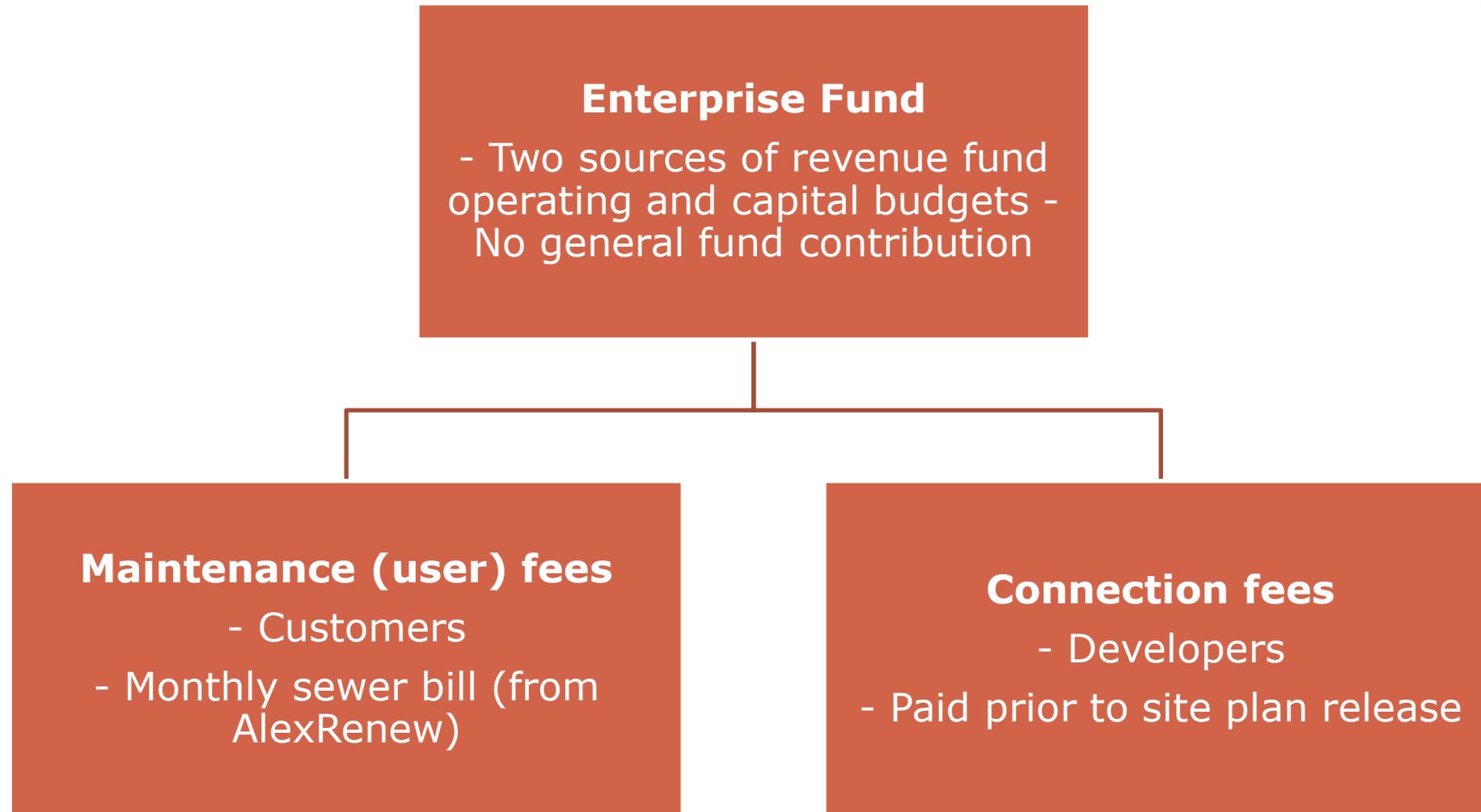
Sewer
Separation
Projects

Backflow
Preventer
Assistance
Program



Area of ongoing sewer inspections

Sanitary Sewer Funding



Any change to sewer user or connection fees requires updates to the City Code and City Council approval

Sewer User Fee (Customers)

- Current fee = \$2.28/1000 gallons (billed monthly)
 - Based on monthly water consumption
 - Typical residential charge: \$10-12 per month
- Winter average analysis
 - Basis for AlexRenew charges
 - More accurately reflects flows in sewer system
 - Seasonal savings of \$1-2 per month on City's sewer bill charges
 - Does not impact current fee

Master Plan Recommendation: Update sewer user fee in City Code to winter average basis, proposed effective date July 1, 2022

Connection Fee Recommendations

- Increase teardown credit from 50 to 100 percent
 - Consistent with neighboring jurisdictions
- Establish senior living facilities as their own use at 75 percent single-family rate
 - Based on water usage study
- Update non-residential fees based on water usage study
- Proposed effective date: July 1, 2022
 - Requires update to City Code 5-6-25.1

Community Outreach



Recommendation

- That the Planning Commission adopt resolution #2021-00008 to amend the Sanitary Sewer Master Plan chapter of the 1992 Master Plan, by replacing the existing chapter with the updated plan



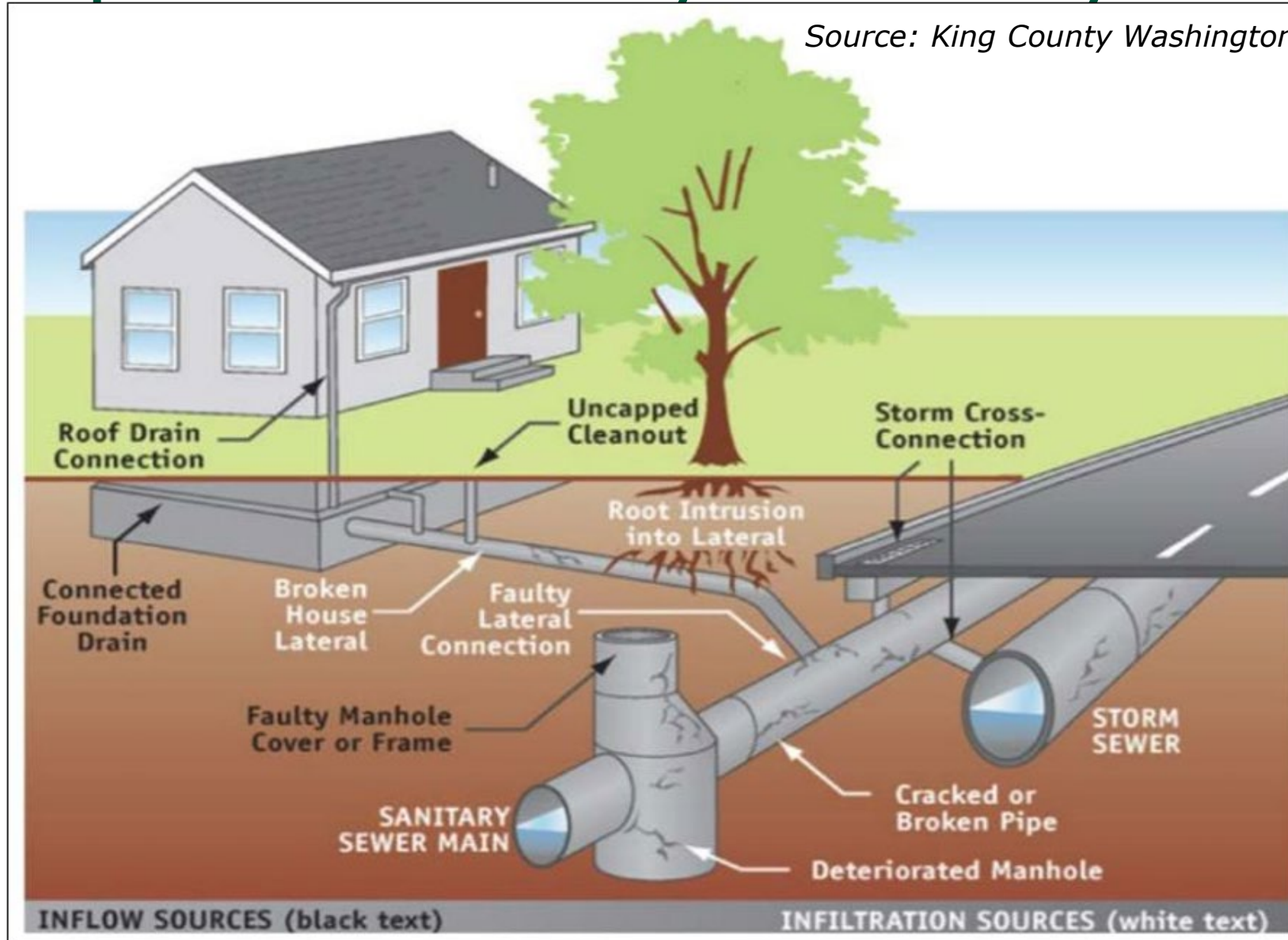
Questions?



Additional Slides

How Does Stormwater Enter the Separate Sanitary Sewer System?

Source: King County Washington



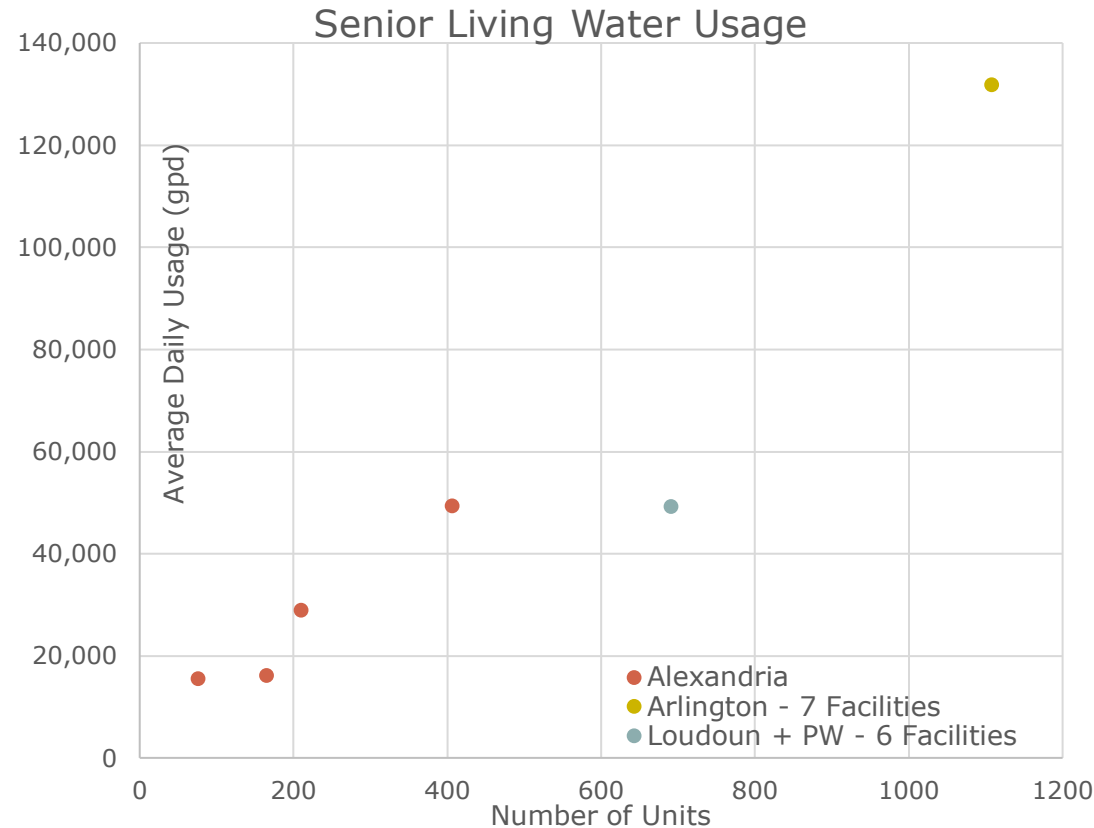
Connection Fee – Senior Living

Varies Across Jurisdictions

Jurisdiction	Senior Living Calculation
City of Alexandria	Memory care – non-residential; assisted living – multi-family (90% single family)
Arlington County	N/A – all connection fees based on number of drainage fixture units
Fairfax County	Fee same as hotel and dormitories
Loudoun County	Established fee per unit/room plus separate fee for commercial kitchen
Prince William County	Commercial if less than 2-inch water meter; otherwise case by case

Senior Living/Memory Care Water Usage Comparison

- Arlington and Alexandria approximately equal to Alexandria multi-family (90% of single-family rate)
- Loudoun and Prince William Facilities 62% of Alexandria's single-family water usage
- Number of variables affect usage



**RECOMMENDATION: ESTABLISH
SENIOR LIVING AS ITS OWN USE
AT 75% SINGLE-FAMILY FEE –
CONTINUE TO MONITOR AND
REASSESS**

Connection Fee – Non-Residential

Meter Size	City of Alexandria (Existing)	Prince William County	Loudoun County	MASTER PLAN RECOMMENDATION
3/4-inch or smaller	\$9,446*	\$10,800	\$13,067	\$13,224
1-inch	\$15,773	\$43,200	\$26,134	\$28,338
1.5-inch	\$31,452	\$75,600	\$56,624	\$56,676
2-inch	\$50,342	2-inch and greater calculated on individual basis	\$104,357	\$141,690

*equal to single-family fee (FY2022)

Updated values represent analysis of existing water usage data for all non-residential properties within the City based on a single-family Equivalent Residential Unit (ERU)