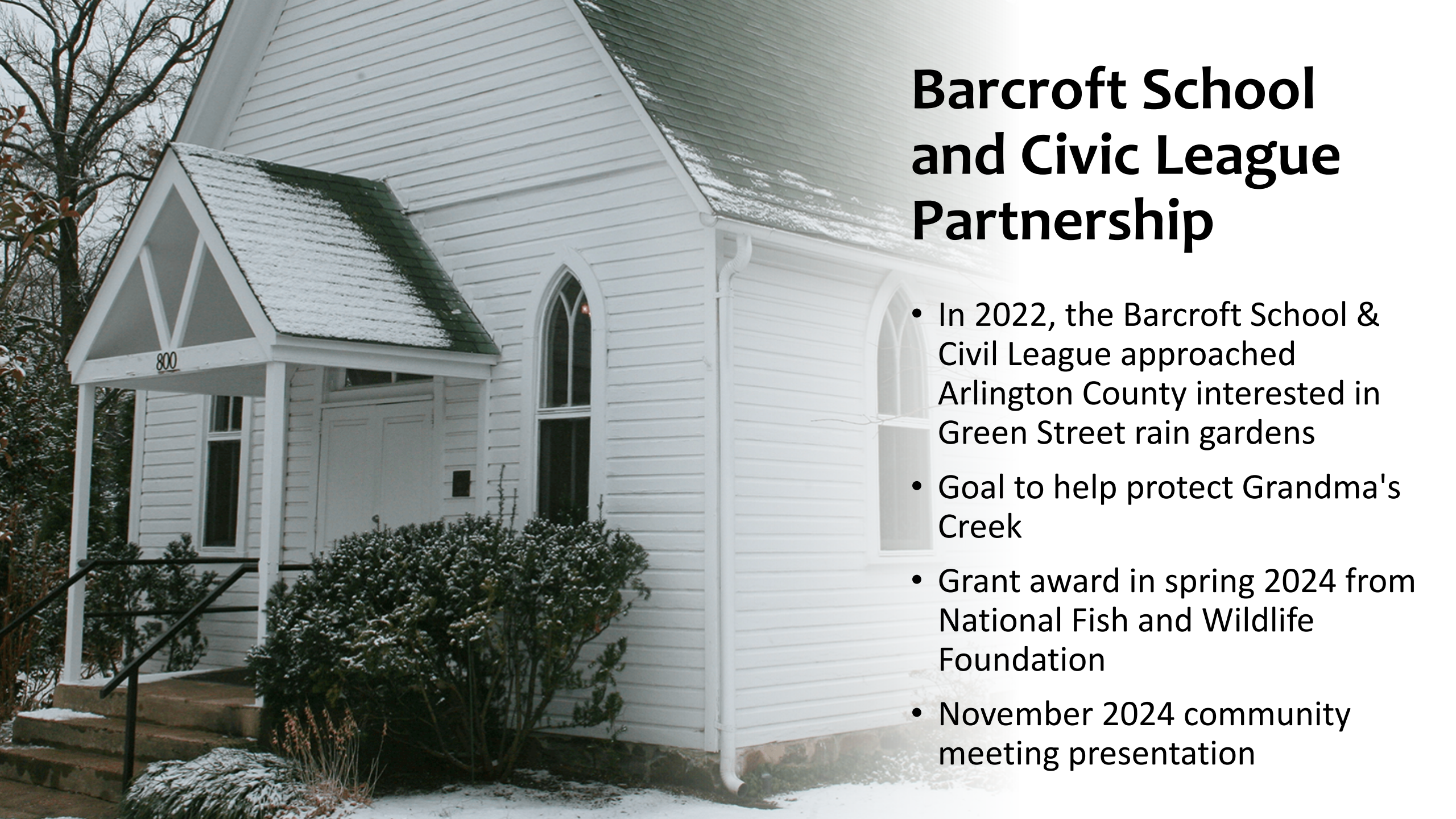




Grandma's Creek Green Streets & Outfall Repair

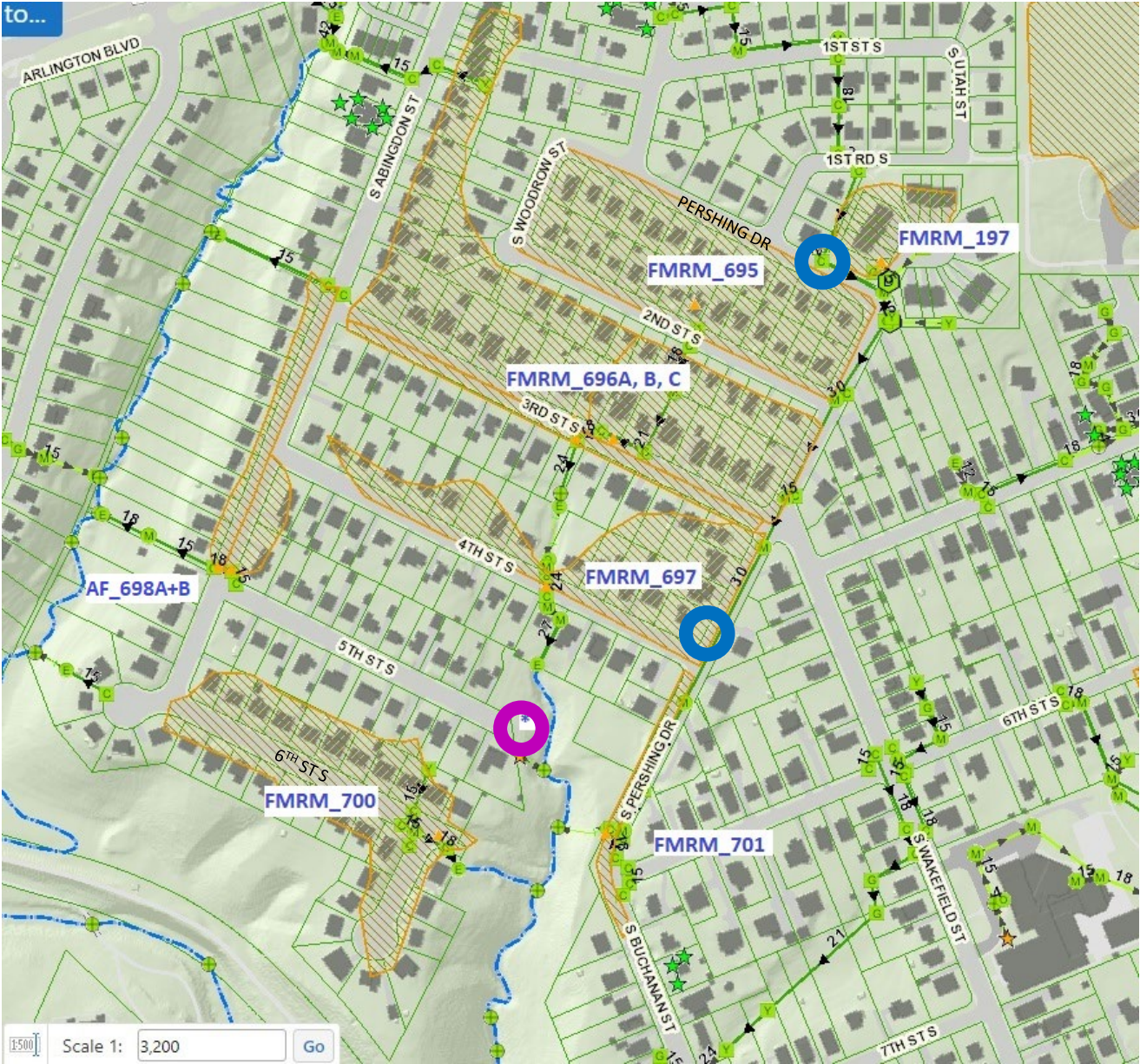


A photograph of a small, white wooden church with a green roof. The church has a small porch with a white railing and a black metal handrail. The porch has the number '800' on it. The church is covered in snow, and there are snow-covered bushes in front of it. The background shows bare trees and a snowy landscape.

Barcroft School and Civic League Partnership

- In 2022, the Barcroft School & Civic League approached Arlington County interested in Green Street rain gardens
- Goal to help protect Grandma's Creek
- Grant award in spring 2024 from National Fish and Wildlife Foundation
- November 2024 community meeting presentation

Grandma's Creek – Barcroft Green Street and Outfall Repair Locations



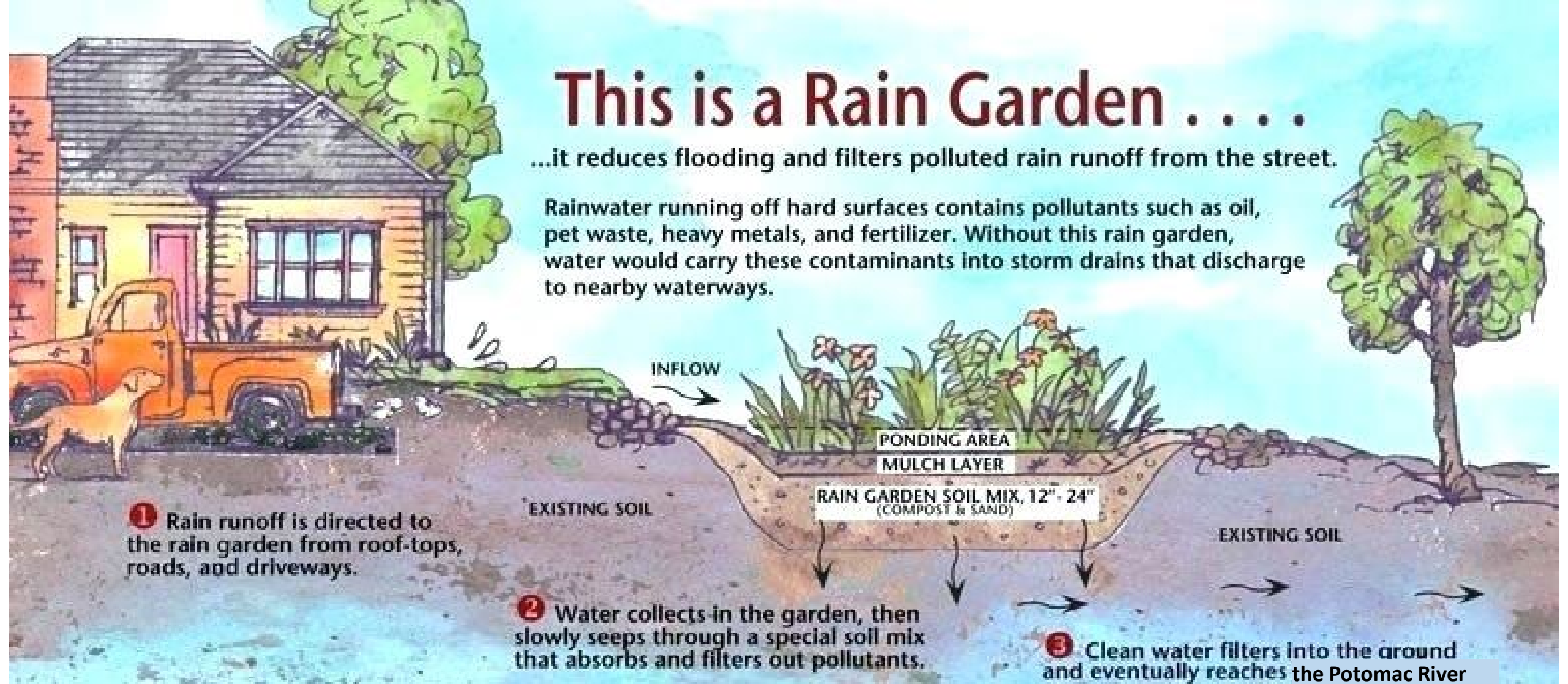
LEGEND

- Planned Green Street
- Planned Gully Repair and Regenerative Step Pools

This is a Rain Garden

...it reduces flooding and filters polluted rain runoff from the street.

Rainwater running off hard surfaces contains pollutants such as oil, pet waste, heavy metals, and fertilizer. Without this rain garden, water would carry these contaminants into storm drains that discharge to nearby waterways.



1 Rain runoff is directed to the rain garden from roof-tops, roads, and driveways.

2 Water collects in the garden, then slowly seeps through a special soil mix that absorbs and filters out pollutants.

3 Clean water filters into the ground and eventually reaches the Potomac River

Green Street Community Benefits

- Green Streets provide additional protection and buffer from street traffic.
- By widening curb space, Green Streets help slow down cars, which benefits pedestrians and cyclists.
- Arlington Green Streets use high quality native plants that attract butterflies and provide habitat for pollinators.
- Arlington Green Street rain gardens are maintained monthly through the growing season (10 months of the year).

Examples of Bump-Out Rain Gardens in Arlington



N KENSINGTON ST



N OAKLAND ST

***NOTE: EVERY RAIN GARDEN IS MAINTAINED 10 MONTHS OF THE YEAR TO ENSURE OPTIMUM PERFORMANCE**

Examples of Bump-Out Rain Gardens in Arlington



N KENTUCKY ST



N PERSHING DR

***NOTE: EVERY RAIN GARDEN IS MAINTAINED 10 MONTHS OF THE YEAR TO ENSURE OPTIMUM PERFORMANCE**

Shrubs

- Red Twig Dogwood (CS)
(*Cornus sericea*)
- Winterberry (IVEF, IVEM)
(*Ilex verticillata* – Male + Female)



Perennials

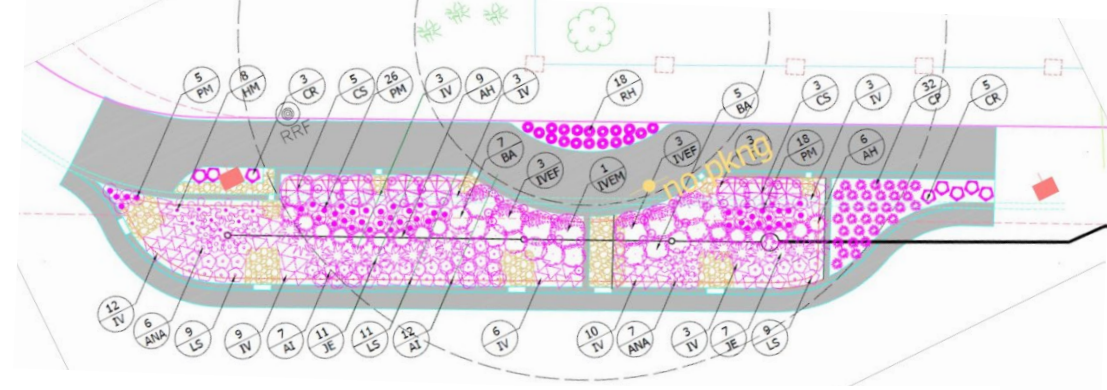
- Eastern Bluestar
- Swamp Milkweed
- New England Aster
- Blue False Indigo
- Pink Coreopsis
- Rose Mallow Hibiscus
- Gayfeather
- Blue Flag Iris
- Mountain Mint
- Wild Petunia
- Golden Groundsel
- Soft Rush, Sedges



1st Rd S and S Pershing Dr



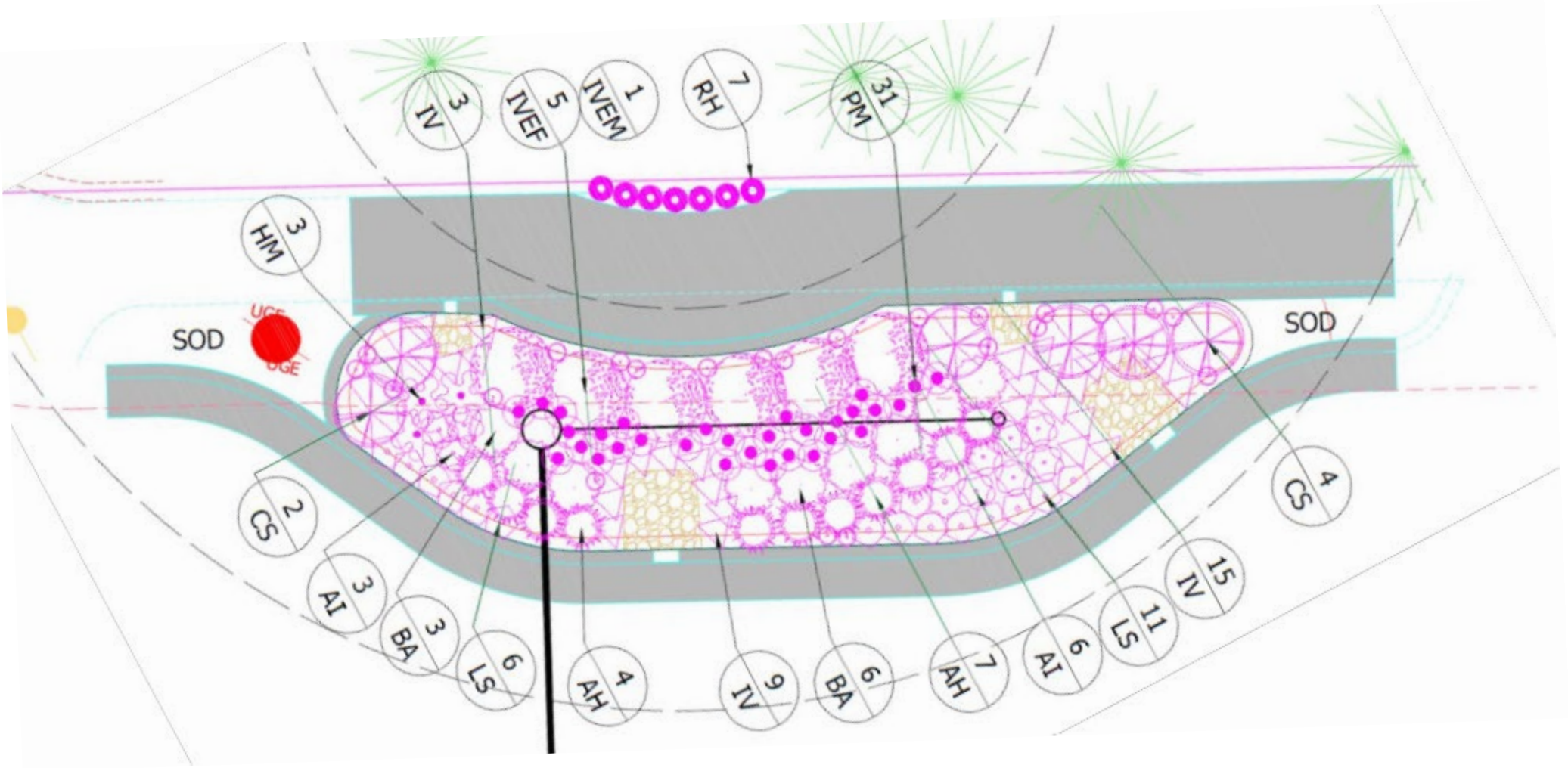
1st Rd S and S Pershing Dr



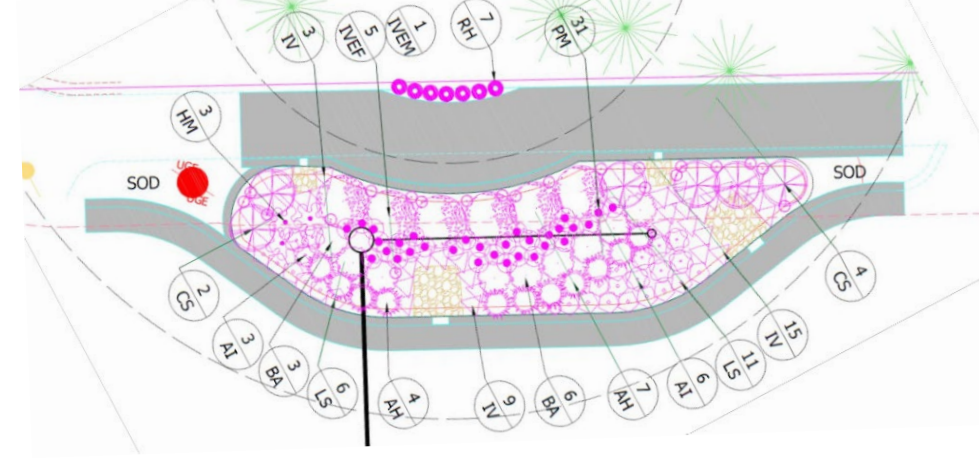
BMP #1 - S Pershing Drive @ 1st Road S - Bioretention Plant List with Links

ID	COMMON NAME (with Links)	LATIN NAME	HEIGHT	BLOOM TIME	BLOOM COLOR	PLANT SELECTION CRITERIA + BENEFITS
SHRUBS						
CS	RED TWIG DOGWOOD	CORNUS SERICEA 'BAILEY'	6'	May - Jun	White	Basin; Thives in water; Winter Interest (Red Twig)
IVEF	WINTERBERRY (FEMALE)	ILEX VERTICILLATA 'RED SPRITE' (WITH BERRIES)	3'	Jun - Jul	White	Basin; Moisture tolerance; Winter Interest (Red Berries)
IVEM	WINTERBERRY (MALE)	ILEX VERTICILLATA 'JIM DANDY' (WITHOUT BERRIES)	4'	None	None	Basin; Moisture tolerance; Pollinates female Winterberries
PERENNIALS / GRASSES						
AH	THREADLEAF BLUESTAR	AMSONIA HUBRICHTII	2'	Apr - May	Powdery Blue	Basin; Showy spring flowers; Needle-like leaves turn gold in autumn
AI	SWAMP MILKWEED	ASCLEPIAS INCARNATA	3'	Jul - Aug	Pink	Basin; Fragrant flowers; Host plant for the Monarch butterfly
ANA	NEW ENGLAND ASTER	ASTER NOVAE-ANGLIAE 'PURPLE DOME'	1.5'	Aug - Sept	Royal Purple	Edge; Profuse showy blooms; Attracts butterflies
BA	BLUE FALSE INDIGO	BAPTISIA AUSTRALIS	3'	May - Jun	Indigo Blue	Basin; Thrives in water; Showy spring flowers; Attracts butterflies
CP	CAREX PENSYLVANICA	PENNSYLVANIA SEDGE	9"	None	None	Edge; Delightful small grass
CR	COREOPSIS ROSEA	PINK THREADLEAF TICKSEED	1.5'	Jun - Sep	Pink	Edge; Showing flowers; Attracts butterflies
HM	ROSE MALLOW	HIBISCUS MOSCHEUTOS 'LORD BALTIMORE'	4'	Jul - Sep	Crimson Red	Basin; Thrives in water; Stunning summer flowers; Attracts butterflies
IV	BLUE FLAG IRIS	IRIS VERSICOLOR	2'	May - Jun	Violet Blue	Basin; Thrives in water; Showy early spring flowers
JE	SOFT RUSH	JUNCUS EFFUSUS	2'	Jun - Aug	Greenish White	Basin; Thrives in water; Evergreen in mild winters
LS	GAYFEATHER	LIATRIS SPICATA	3'	Jul - Aug	Red-purple	Basin; Thrives in water; Showy flowers; Attracts butterflies
PM	SHORT-TOOTHED MOUNTAIN MINT	PYCNANTHEMUM MUTICUM	2'	Jul - Sep	Lavender	Basin; Thrives in water; Attracts pollinators; Aromatic leaves (mint)
RH	WILD PETUNIA	RUELLIA HUMILIS	1.5'	May - Oct	Lilac Blue	Edge; Drought tolerant; Attracts hummingbirds/butterflies
GROUNDCOVERS						
PA	GOLDEN RAGWORT	PACKERA AUREA	1'	Apr	Yellow	Basin; Spectacular spring flowers; Attracts butterflies

Pershing & 4th St Green Street



Pershing & 4th St Green Street



BMP #2 - S Pershing Drive @ 4th Street S - Bioretention Plant List with Links

ID	COMMON NAME (with Links)	LATIN NAME	HEIGHT	BLOOM TIME	BLOOM COLOR	PLANT SELECTION CRITERIA + BENEFITS
SHRUBS						
CS	RED TWIG DOGWOOD	CORNUS SERICEA 'BAILEYI'	6'	May - Jun	White	Basin; Thrives in water; Winter Interest (Red Twig)
IVEF	WINTERBERRY (FEMALE)	ILEX VERTICILLATA 'RED SPRITE' (WITH BERRIES)	3'	Jun - Jul	White	Basin; Moisture tolerance; Winter Interest (Red Berries)
IVEM	WINTERBERRY (MALE)	ILEX VERTICILLATA 'JIM DANDY' (WITHOUT BERRIES)	4'	None	None	Basin; Moisture tolerance; Pollinates female Winterberries
PERENNIALS / GRASSES						
AH	THREADLEAF BLUESTAR	AMSONIA HUBRICHTII	2'	Apr - May	Powdery Blue	Basin; Showy spring flowers; Needle-like leaves turn gold in autumn
AI	SWAMP MILKWEED	ASCLEPIAS INCARNATA	3'	Jul - Aug	Pink	Basin; Fragrant flowers; Host plant for the Monarch butterfly
BA	BLUE FALSE INDIGO	BAPTISIA AUSTRALIS	3'	May - Jun	Indigo Blue	Basin; Thrives in water; Showy spring flowers; Attracts butterflies
HM	ROSE MALLOW	HIBISCUS MOSCHEUTOS 'LORD BALTIMORE'	4'	Jul - Sep	Crimson Red	Basin; Thrives in water; Stunning summer flowers; Attracts butterflies
IV	BLUE FLAG IRIS	IRIS VERSICOLOR	2'	May - Jun	Violet Blue	Basin; Thrives in water; Showy early spring flowers
LS	GAYFEATHER	LIATRIS SPICATA	3'	Jul - Aug	Red-purple	Basin; Thrives in water; Showy flowers; Attracts butterflies
PM	SHORT-TOOTHED MOUNTAIN MINT	PYCNANTHEMUM MUTICUM	2'	Jul - Sep	Lavender	Basin; Thrives in water; Attracts pollinators; Aromatic leaves (mint)
RH	WILD PETUNIA	RUELLIA HUMILIS	1.5'	May - Oct	Lilac Blue	Edge; Drought tolerant; Attracts hummingbirds/butterflies
GROUNDCOVERS						
PA	GOLDEN RAGWORT	PACKERA AUREA	1'	Apr	Yellow	Basin; Spectacular spring flowers; Attracts butterflies

Innovative Biochar in Green Streets and Gully Outfall for Soil Structure and Carbon Capture

- Arlington will be including Biochar soil amendment in the Green Streets and Gully Outfall filter media.
- Biochar is pulverized charcoal that is added to soil.
- Biochar benefits (from [PA DCNR](#))
 - Improves soil structure
 - Holds water and nutrients in the soil, while still making them available to plants
 - Continues to store carbon in the soil in a form that does not break down
 - Because biochar is nearly pure carbon, it cannot rot, unlike wood mulches. Each pound of charcoal in the soil keeps three pounds of carbon dioxide out of the air.



Questions about Green Streets?

Gully Repair at 5th St: Challenges

- Gully is in poor shape and actively eroding
- Invasive bamboo is spreading - but not controlling erosion
- Very steep drop
- Steep stream banks



Runoff from 5th Street South Beginning of Gully Erosion





Top of Gully
From Middle

Gully Erosion Top to Bottom





Lower Gully
From Above

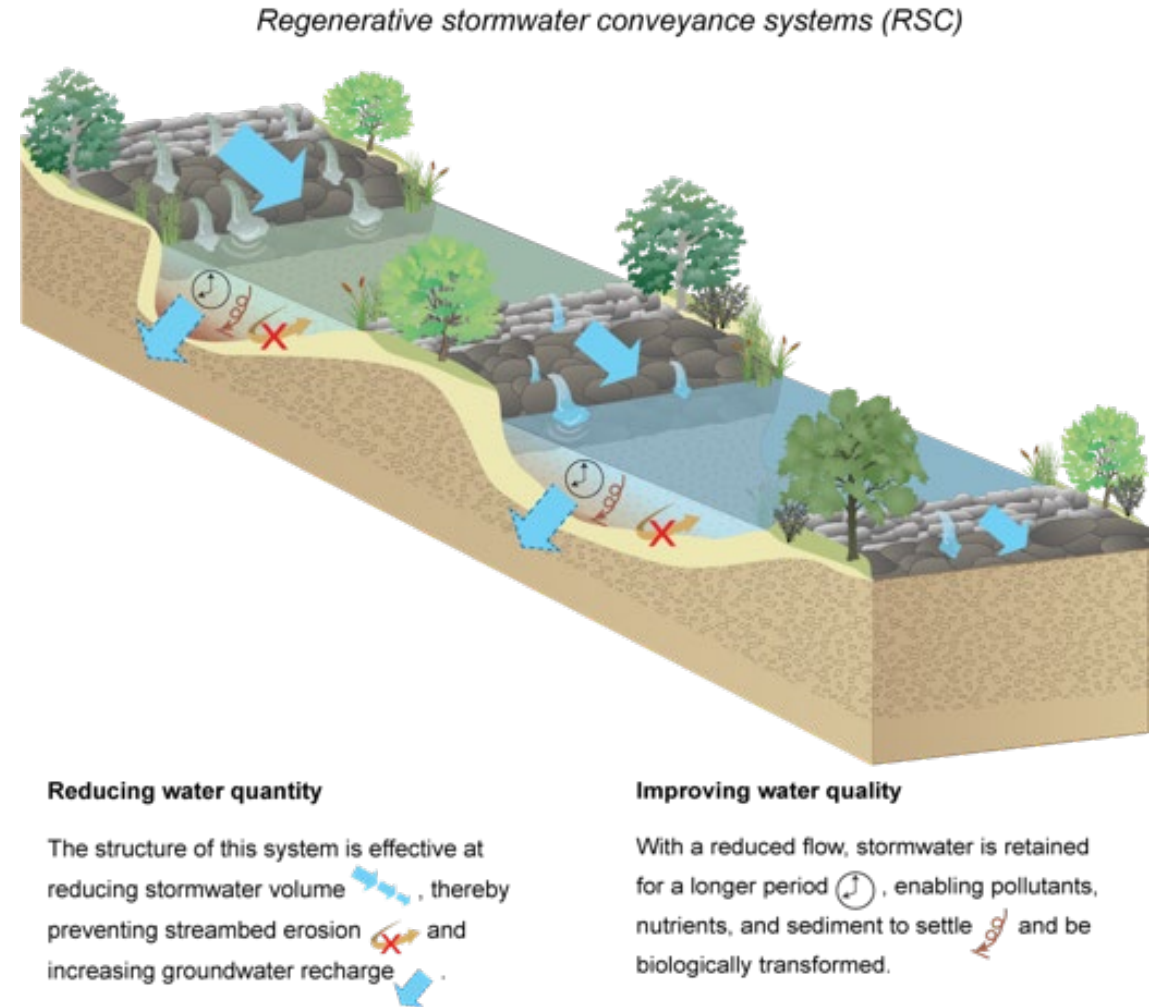


Closer View of Erosion



Step Pool Filtration

- Step pools with a sand and soil filter will slow down and absorb stormwater
- Step pools will convey water safely in larger storms
- Equipment will access the channel through the bamboo areas
- Robust replanting of local ecotype native plants will revegetate and stabilize the slopes



Conceptual diagram illustrating Regenerative stormwater conveyance systems (RSC). Regenerative stormwater conveyance (RSC) systems are a series of pools separated by rocky berms. They contain a thick seepage bed made of sand and wood chips. This type of system is generally considered inappropriate to use in existing stream channels. Diagram courtesy of the Integration and Application Network (ian.umces.edu), University of Maryland Center for Environmental Science. Source: Chesapeake and Atlantic Coastal Bays Trust Fund, 2013. Stormwater Management: Reducing Water Quantity and Improving Water Quality. IAN press, newsletter publication.

Large Bamboo Stand at Eroding Gully 5th Street South

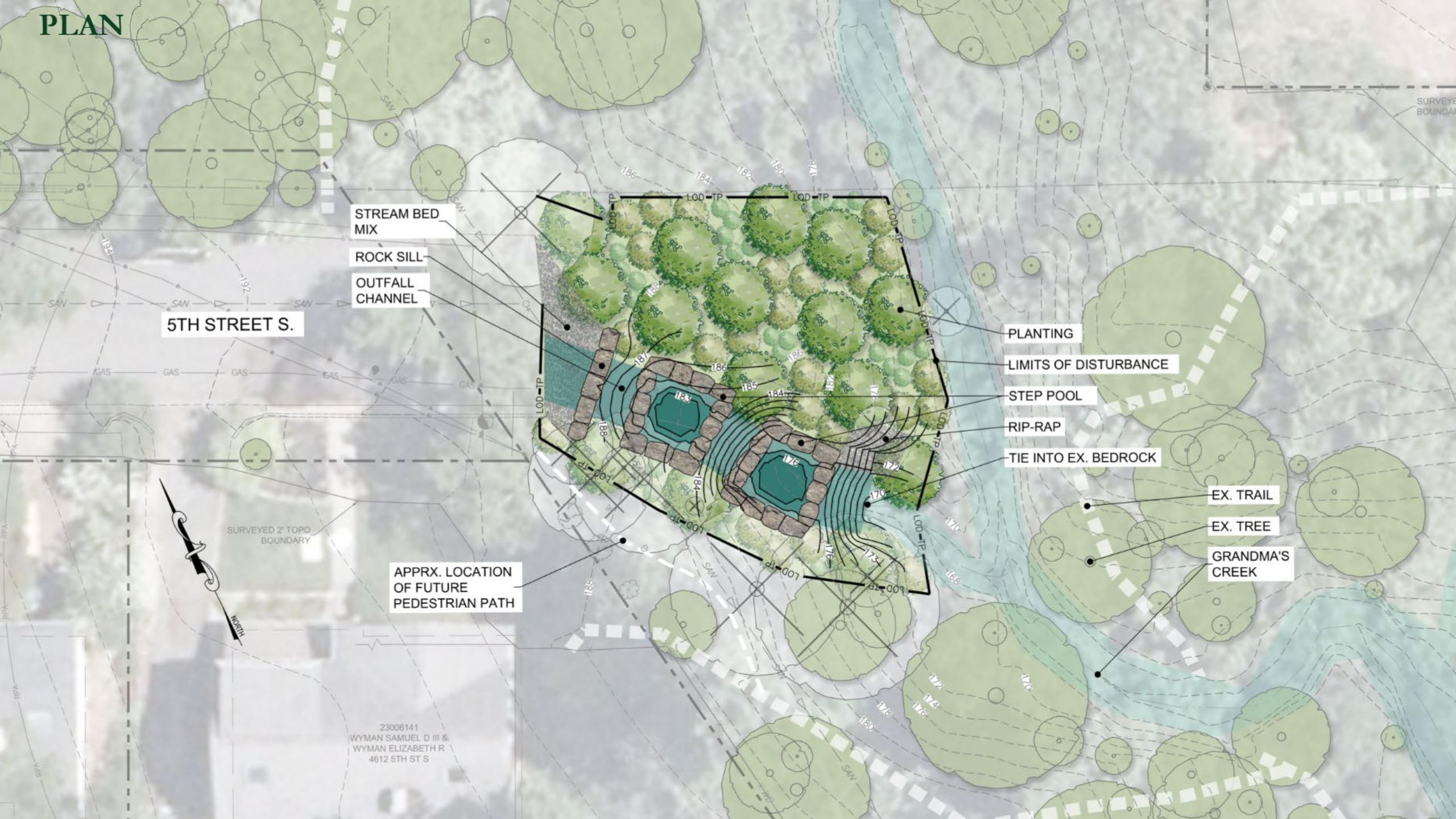


Bamboo Removal and Native Replanting

- Bamboo removal to 18 inches below surface in most of the planting area
- Second phase of bamboo treatment in the following spring (primarily in areas without deeper excavation)
- Robust replanting



PLAN

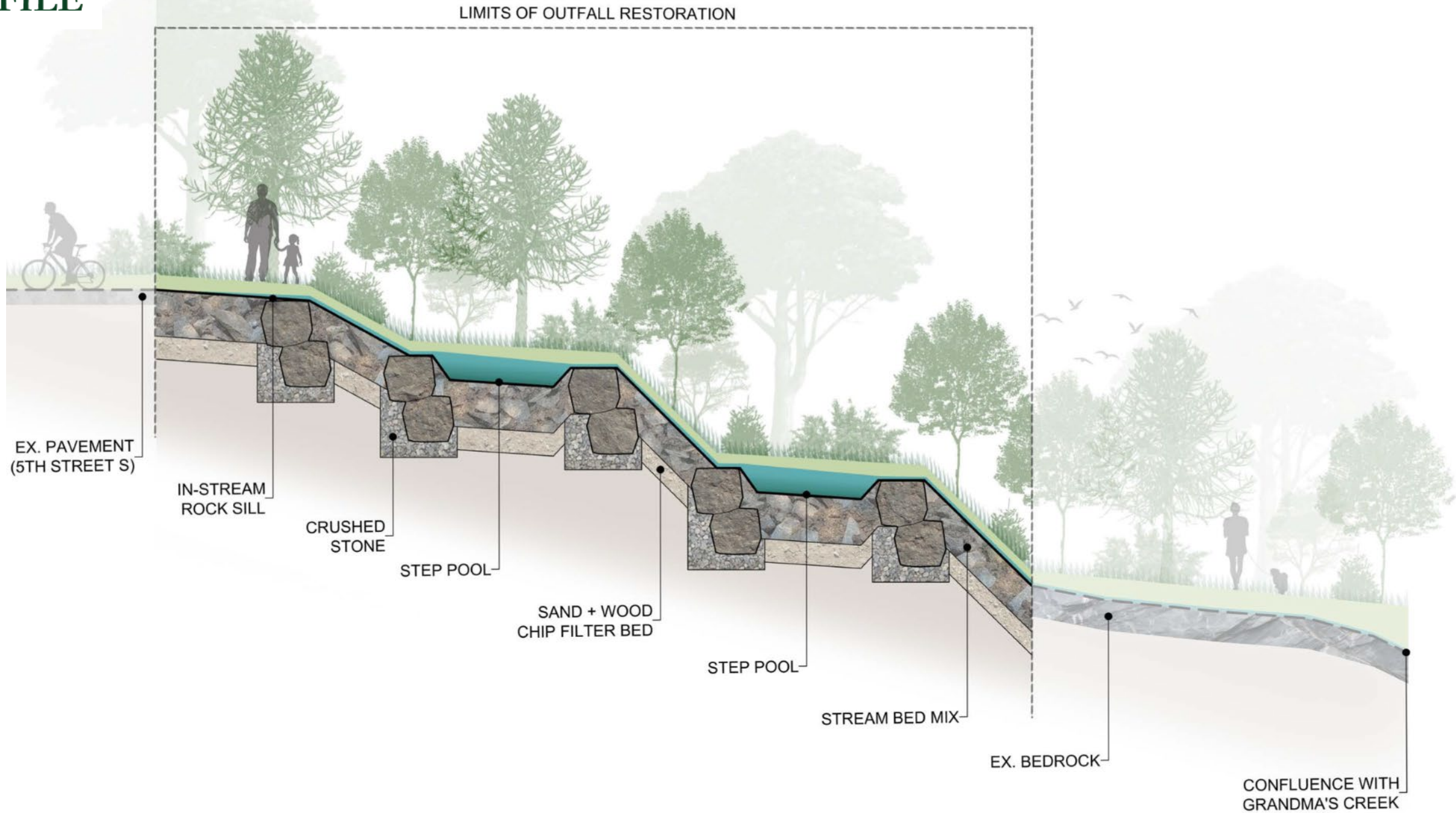


PLAN

White lines show location of profile in the next slide.



PROFILE



Gully Repair Replanting: Trees

- **Canopy Trees:** Bitternut Hickory, Common Hackberry, White Oak, Northern Red Oak, Black Oak
- **Medium/Understory Trees:** Red Maple, Pawpaw, American Hornbeam, Flowering Dogwood, American Holly, Black Gum



Gully Repair Replanting: Small Trees & Shrubs

- **Small Trees and Shrubs:** Downy Serviceberry, Spicebush, Maple-leaf Viburnum, Strawberrybush
- **Stream Bank:** Black chokeberry, Smooth Hydrangea, Arrowwood
- **Stream Edge:** Smooth Alder, Buttonbush, Silky Dogwood, Elderberry

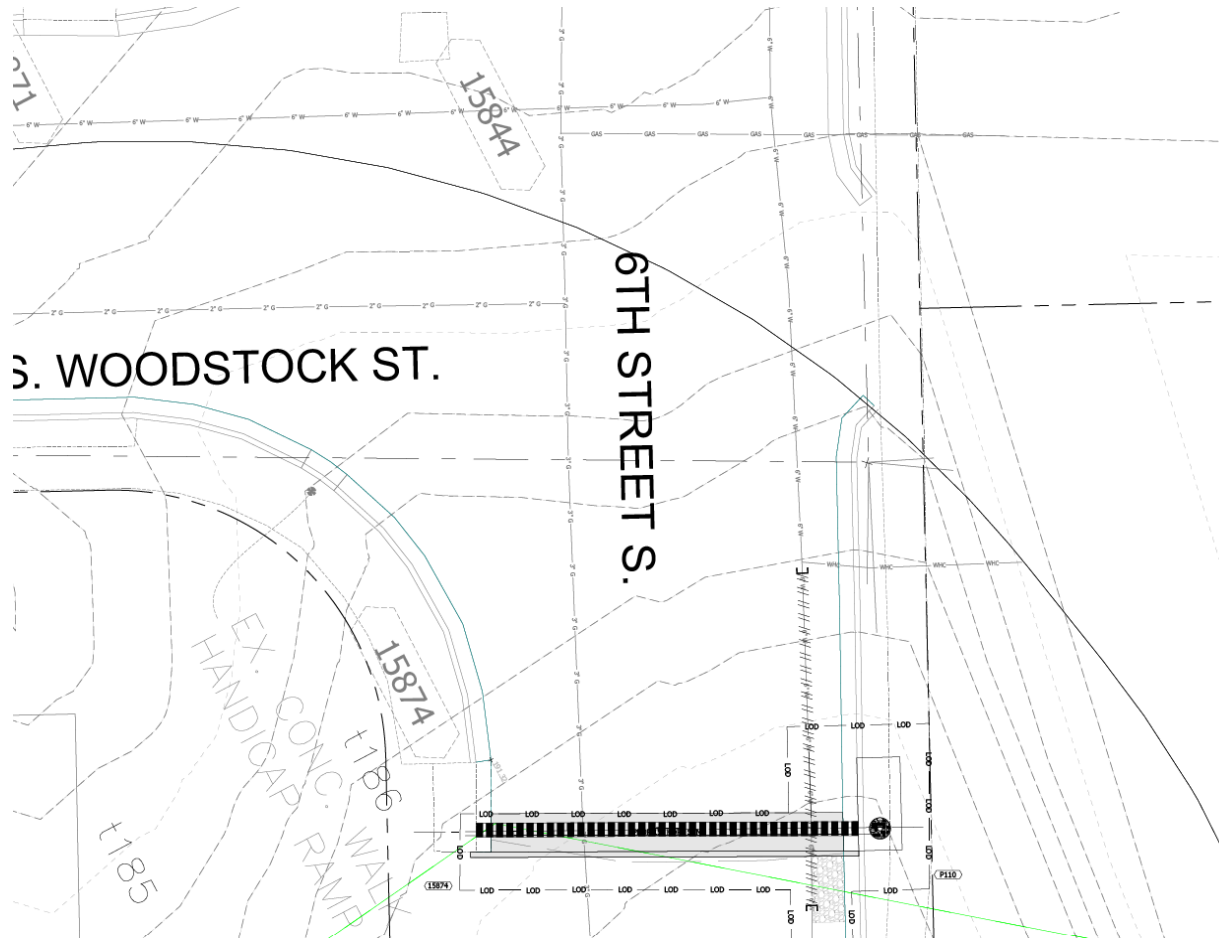


Gully Repair Replanting: Native Plants & Groundcover

- Herbaceous "Workhorses"
- Coneflower/ Rudbeckia, Avens, Goldenrod, Senna, Agrimony, Bidens, Wingstem, Boneset, Vervain, Orange Butterflyweed, Asters, Bergamot, Black Cohosh, White Wood Aster, Mistflower
- Sedges, Rushes, Grasses



New Storm Drain Proposed for 6th St S



- New storm drain to capture runoff and direct it through the existing pipe system
- Curb will also help direct the water
- Cobble will help dissipate flow in case of heavy storms

Questions about the Gully Repair?

A photograph of a small, white wooden church with a green roof. The church is covered in a light layer of snow. It has a small porch with a white railing and a black door. The number '800' is visible on the porch. The church is surrounded by snow-covered bushes and trees.

BSCL Role in Grant Partnership

- Spark the project!
- Facilitate neighbor outreach
- Tree planting program outreach
- Invasive plant removal events
- Promote Stormwater at Home program, Rain Barrel Workshop
- Project updates & engagement
- Promote invasive plant removal, stream cleanups, rain garden workshops, and the annual Green Home and Garden Tour.

Tree Planting

EcoAction Arlington's Tree Canopy Fund
Volunteer Planting at 6th Street S



Tree Planting By the Numbers

40 Native Trees Planted
March 2024 – March 2025

Native trees and large shrubs planted on private property with EcoAction Arlington's Tree Canopy Fund
23 native trees, 18 large native shrubs planted in Spring and Fall 2024
Photos taken March 2025

Native tree and shrub planting volunteer event with Arlington Parks and Natural Resources
17 native trees, 13 large native shrubs planted
71 locally harvested native live stakes planted (61 trees, 10 large shrubs)
March 8, 2025



Tree Canopy Fund Displays, Outreach, and Canvassing

BACL residents and Tree Steward volunteers
helped promote the program in 2024

ecoaction
arlington
ecoaction
arlington

Free trees available through the
Arlington County Tree Canopy Fund
www.ecoactionarlington.org/trees
tree@ecoactionarlington.org

Native Trees and Large Shrubs on Private Property with EcoAction Arlington's Tree Canopy Fund



4217 4th St South
Red Oak, Scarlet Oak, White Oak,
Black gum (x2), Arrowwood
viburnum (x3), Buttonbush



Tree, Shrub and Live Stakes Planting Invasive Plant Removal March 2025

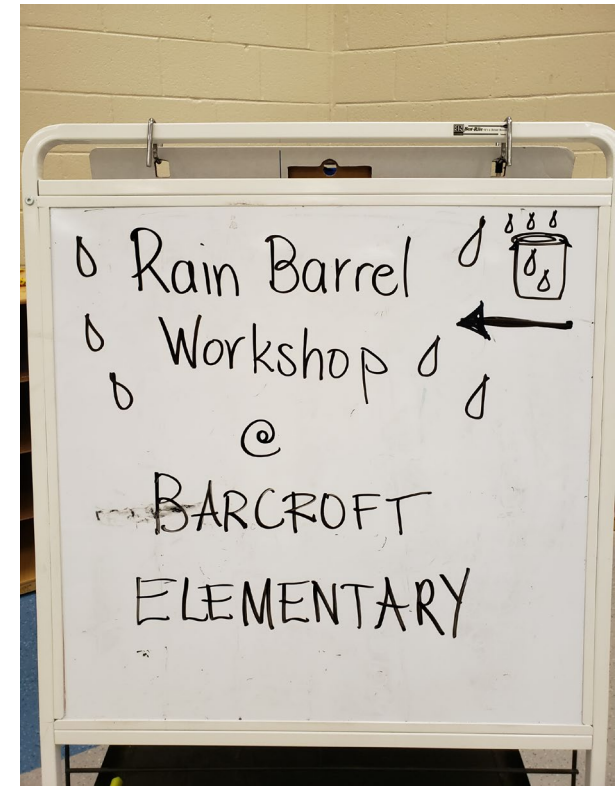
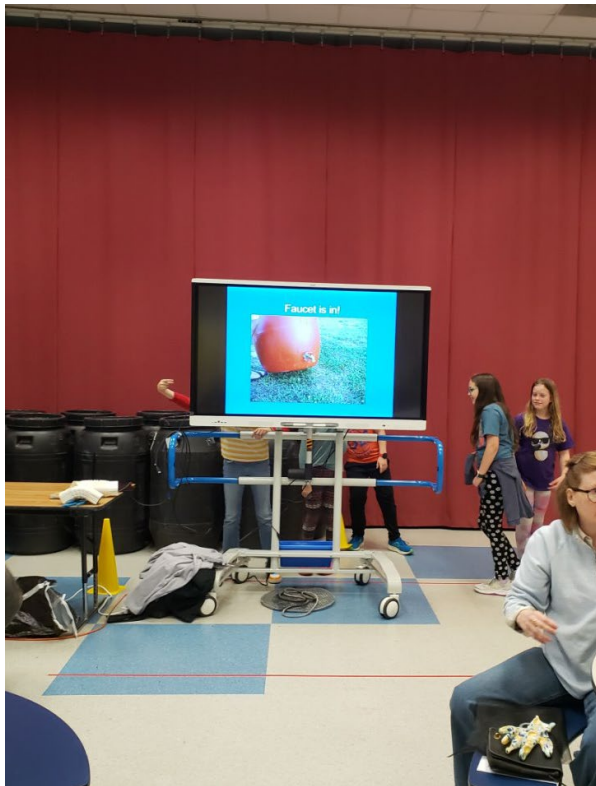








Rain Barrel Workshops at Barcroft ES, March 2024 and 2025



March 2025 Workshop



Barcroft Home
Featured in Green
Community Tour

June 2024



Los arroyos y las cuencas de Arlington

Lily Whitesell
Especialista en aguas pluviales
Condado de Arlington
Septiembre 2024
Foto: Parque Barcroft – Four Mile Run

Presentation to Defensores de la Cuenca Embajadores de los Arboles (Sept 2024)



VISITA

Parques, arroyos y ríos locales



CONECTAR

Con el mundo natural en su comunidad



SER VOLUNTARIO

Plantar arboles, ayudar a limpiar parques y arroyos

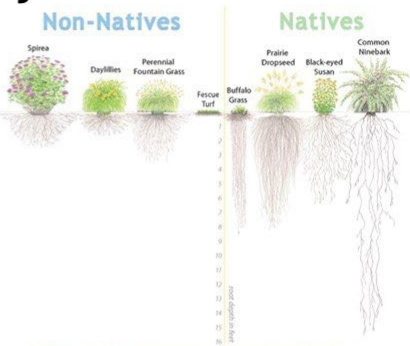
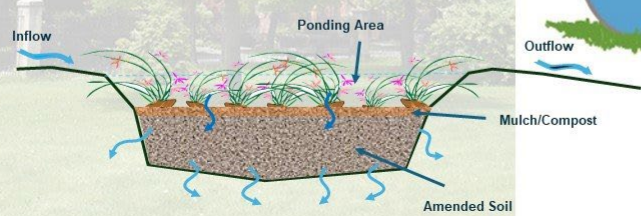


APRENDER

Sobre organizaciones y recursos naturales locales

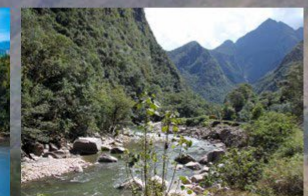
¿Cómo ayudar a proteger los arroyos?

- Tómese el tiempo para apreciar la naturaleza.
- Ayude a limpiar arroyos y parques.
- Plante árboles y plantas nativos.
- ¡Protege los peces: solo lluvia en el desagüe pluvial!



¿Por qué estamos aquí, por qué nos importa proteger los árboles, los arroyos, los ríos y el medio ambiente?

- Cuidar y conectar con el mundo natural
- Proteger las fuentes de agua potable
- Biodiversidad global
- Responder al cambio climático
- Protección de animales y plantas locales
- Gestionar un mundo sostenible
- Manejo de cuencas hidrológicas
- Entender mejor la naturaleza local



Arte de Mamani Mamani, <https://mamanimamani.com/>

DPR-Long Branch Nature Center Partnership

- Watershed outreach to multilingual and underserved audiences
- 4/15/2025 Arlington Teen After-School/Spring Break Stream Cleanup, 14 people reached
- 4/27/2025 Multilingual Long Branch/Glencarlyn Park Pop-Up Spanish Language Engagement, 75 people reached
- DPR Partnership with True Ground Housing (formerly APAH) at Buchanan Gardens & Arlington Mill: Family hikes & youth activities to come

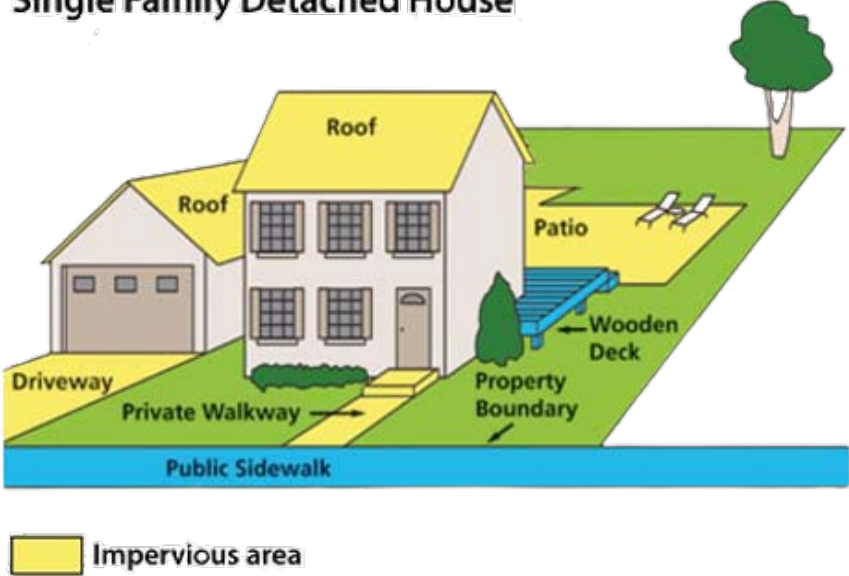
Stormwater Utility Credit Program

- Rain barrels, tree planting, native plant landscaping help Grandma’s Creek – and may earn you a discount on your stormwater utility fee.
- See below for voluntary actions that qualify for credit on single family residential lots.*
- Complete your project this year to apply for next year’s credit program, apply from November - January.

* This list does not include mandatory structural stormwater management or qualified activities for multifamily or nonresidential properties.

Single Family Residential Voluntary Actions 5% credit each	• Conservation landscaping, 150 ft² (new, ongoing credit) • Tree planting, 1-3 trees (new, annual credit) • Rainwater collection, 100 gallons (new or existing, ongoing credit)
Single Family Residential Voluntary Actions 10% credit each	• Rain garden, 100 ft² (new or existing, ongoing credit) • Permeable pavement, 150 ft² (new or existing, ongoing credit)
Maximum Credit = 35% per property	

Single Family Detached House



<https://bit.ly/ArlingtonStormwaterUtility>

Questions?
StormwaterUtility@arlingtonva.us

Grandma's Creek Watershed Improvements

Next Steps

- Spring 2025: Final Design Engagement
- July/August 2025: Start Construction on Gully Repair
 - Gully Repair Estimated Project Duration: 3-6 months
 - Fall 2025 Planting
 - Spring 2026: Phase 2 Bamboo Treatment
- Spring 2026: Green Street Estimated Project Start
 - Estimated Project Duration: 2-4 months
 - Planting Schedule TBD
- Spring 2026: Project Wrap-Up and Planting

Thank you for your engagement on this project!

Anne Guillette, Project Manager

aguillette@arlingtonva.us, 703-228-3956

Lily Whitesell, Stormwater Outreach Specialist

lwhitesell@arlingtonva.us, 703-228-3042

