

Fall 2023

Small Forest Protection Program

STUDENTS

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UNDER THE SUPERVISION OF

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COURSE

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PALS

An initiative of the National Center for Smart Growth
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in Sustainability**

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Executive Summary

The Montgomery County Planning Department asked our team of Environmental Science and Policy capstone students at the University of Maryland to create a set of deliverables that would support the creation of Montgomery Planning's Small Forest Protection Program.

This program will allow owners of small, forested properties to help developers meet offsite forest retention requirements under the Forest Conservation Law. A reinterpretation of the County's Forest Conservation Law limits the availability of offsite forest credits available for purchase by developers seeking to meet their forest-retention requirements. The new small forest program being launched by Montgomery Planning will meet the need for additional forest availability for developers to meet offsite retention requirements.

The project's deliverables are an informative webpage outline and application process for prospective program participants; an attribute table of potentially eligible property owners and their contact information, identified via spatial analysis using Geographical Information Systems; and a draft letter of solicitation to property owners informing them of how they can be involved in the program.

These deliverables were founded primarily on research into Montgomery Planning's website and its previous initiatives. Existing webpages were analyzed to determine the features that contribute to their current success. To identify property owners for the program, a GIS map was constructed by conducting a spatial analysis of various layers provided by Montgomery Planning. From this map, potentially eligible property owners were identified to be contacted with the letter of solicitation.

In our final webpage guideline, we include a program overview, requirements for property owners, how they can apply, and information for developers. Additionally, we include Frequently Asked Questions and a section of contact information for department staff. Finally, the application form layout includes all the information property owners need to be considered for inclusion in the program.

Using the GIS map, almost 10,000 potentially eligible properties were identified. Several specific areas from the initial property list are recommended for closer attention due to the community benefits and ecosystem services that they provide. These properties may be considered for future contact by Montgomery Planning as they launch the new small forest program.

Introduction and Background

The Small Forest Protection Program implemented in Montgomery County, Maryland will link owners of small, forested properties to developers that need to meet offsite forest retention requirements. A new amendment to Maryland's Forest Conservation Act limits the availability of offsite forest credits available for purchase by developers seeking to meet their forest-retention requirements under the law. The small forest program being launched by the Montgomery County Planning Department (Montgomery Planning) will meet the need for additional forest availability for developers to meet offsite retention requirements.

This project's objectives include deliverables meant to support the creation of Montgomery Planning's Small Forest Protection Program: an informative webpage and application process for prospective program participants, as well as the identification of eligible property owners who can be contacted with a letter of solicitation about the program.

Montgomery County Forest Conservation Law

The Montgomery County Forest Conservation Law (FCL) is based on the State of Maryland's Forest Conservation Act. The County Council enacted the law after finding that tree loss due to development and other forest-disturbing activities is a serious problem in Montgomery County. The purpose of the county's FCL is to protect forested areas by establishing procedures, standards, and requirements to minimize tree loss resulting from development, and to maintain and plant trees for the benefit of the residents and future generations. Overall, the purpose of the law is to provide a focused and coordinated approach to county forest conservation activities (*Montgomery County Forest Conservation Law, 2023*)

The Forest Mitigation Bank Program

Anyone subject to the Forest Conservation Law, including developers, must meet a calculated forest retention or forest planting requirement for property under development. The Forest Mitigation Bank Program gives developers who can't plant or maintain trees on their own properties the opportunity to purchase credits offsite to meet FCL requirements (*Montgomery County Forest Mitigation Bank Program, 2022*). The owner of the forest bank site is usually the owner of the property, and their participation in the forest bank program results in the protection of the forest on their property and monetary compensation for selling credits through the forest bank program (*Establishing a Forest Mitigation Bank, 2022*)

Requirements for forest mitigation bank sites from Montgomery Planning (2022) and the State Forest Conservation Program (2021) are:

- at least one acre of forested property
- undeveloped land in Montgomery County with no existing easements
- treatment of any invasive species
- a planting ratio of “200 ¾”-1” caliper trees per acre and 100 1.5”-2” caliper trees per acre (*Establishing a Forest Mitigation Bank, 2022*)
- proper planting methods and deer protection.

Also, planted forests using funds or other incentives from state, federal, or local programs may not become part of the bank. (*Establishing a Forest Mitigation Bank, 2022; State Forest Mitigation Banks, 2021*).

Although the Forest Mitigation Bank program provides many sites for available credits, there are numerous missed opportunities for establishing sites that don’t meet the above criteria. The Forest Mitigation Bank program tends to cater to larger planted or existing forest areas and can be expensive to establish. There is also a need to encourage planted banks and capture smaller areas of existing forest through a 1:1 program, rather than the bank program that would be considered 1: many.

The Goal of the No Net-Loss Initiative

Montgomery Planning launched its No Net Loss Initiative in November 2021 with the goal of balancing the increased need for tree planting and protection with the increasing costs of forest mitigation by complying with the Forest Conservation Law.

The initiative was created after strategic meetings with 24 stakeholder groups that included nonprofits, government agencies, and the development community. These meetings allowed for collaboration in reviewing current laws and policies along with discussions about the county’s future forest conservation practices. In these discussions, it was suggested that expanding the methodologies used to establish forested ecosystems as defined under Forest Conversion regulations would be useful. Expansion would increase options to establish forests that meet sustainability metrics outlined in the law. The Forest Conservation Law has ensured that projects meet the standards to protect on- and off-site pre-existing forest, which has resulted in the permanent protection and planting of over 15,000 acres of forest (Montgomery Planning, 2023).

The Planning Department and stakeholder meetings led to Bill 25-22, which amends the Forest Conservation Law to ensure that, county-wide, an equal or greater area of forest is planted than removed by projects subject to the law. This initiative works in tandem with *Thrive Montgomery 2050*, a comprehensive sustainable and equitable planning vision for the county, and the county's *Climate Action Plan*. The climate plan states that "Montgomery County must retain and increase the tree canopy, which generally refers to trees outside of forests," under its Carbon Sequestration Actions to meet the goal of cutting greenhouse gas (GHG) emissions by 80% by 2027 and by 100% by 2035 (Montgomery County, 2021, p. 188).

The Small Forest Protection Program

When Maryland's Forest Conservation Law was reinterpreted to "temporarily eliminate forest banks comprised of protected existing forest," it decreased the amount of purchasable bank credits available for developers to meet FCL requirements. Although a recent state amendment via Senate Bill 526 will reintroduce existing forest banks, there will be new limitations on their use.

To provide developers with more options to meet the requirements, Montgomery County is considering a new Small Forest Protection Program. The new program expands land eligibility by focusing on small properties for off-site mitigation. Sites ranging from 0.5 to 5 acres would include smaller forest areas than the current program's minimum size requirement of 1 acre. Additionally, existing forest property owners will need to match 1:1 with a prospective developer seeking off-site mitigation; only one transaction per property will be permitted.

Property owners in Montgomery County may apply to include their land in the Small Forest Protection Program if it meets the following requirements:

- presence of 0.5-5 acres of contiguous tree canopy within property lines
- no conflicting existing forest easements or agricultural easements on the forested property
- no existing approved Forest Conservation Plan
- forest is accessible for a forest conservation inspector.

Potentially eligible properties must meet all of the criteria listed above. To identify qualifying properties, for the purpose of contacting property owners about the opportunity, Montgomery Planning needs potentially eligible properties to be identified within the county using GIS analysis. This identification and contact process is crucial to launching the new program and encouraging participation within it.

Objectives

The project's first objective was to create a draft webpage in the form of a Word document for use by Montgomery Planning. This webpage includes information about the need for the Small Forest Protection Program as well as the requirements for property owners to qualify. This objective also includes designing an application form for property owners. This objective included brainstorming other names for the program that convey the program's purpose and attract attention.

The second objective was to create a GIS layer and attribute table that identifies eligible property owners. This would identify properties within the county that contain forest between 0.5 and 5 acres and isn't currently under an agricultural or conservation easement.

The third objective was to write a draft letter to be mailed at the program's launch to notify property owners about the program and their eligibility. This mailer explains the program, why there's a need for it, and how to apply.

The fourth objective was a report about the Small Forest Protection Program and its creation. This report summarizes why the program is needed, including relevant background information. It also includes the practical information for eligible property owners, and the methods used to create each deliverable requested by Montgomery Planning. Each deliverable (defined in objectives one, two and three) is also included in the report.

Methods

Developing a Webpage

To develop a website dedicated to the new Small Forest Protection Program, the county's Forest Conservation Law and the state's Conservation Act were examined to understand their requirements and the new criteria for the Small Forest Protection Program.

In this process, we also examined resources specific to the Forest Mitigation Bank program and information about Montgomery Planning's No Net Loss Initiative. County policies encompassing broader environmental initiatives such as *Thrive Montgomery 2050* and the county's *Climate Action Plan* were also examined to identify overlapping requirements and procedures that might reinforce the need for the new program or impact it in the future.

Montgomery Planning webpages were examined for format and resources on past programs and the new program, noting key features that can be used in developing a new webpage. After compiling the information required, the components were organized in a Microsoft Word document with hyperlinks to relevant documents such as the NRI/FSD checklist, Category 1 Forest Conservation Easement template, and the application form. A Frequently Asked Questions section will also be included.

Creating the Letter of Solicitation

Existing letters from other county programs were a starting point to compose a letter of solicitation. The letters were drawn from various county websites, particularly the Montgomery Planning website. The effective strategies and appropriate terminology were compiled to best reach the desired recipients and encourage their participation.

Creating the Application Form

To create an application form, existing application forms were researched, noting their required information, including property owner, property features, and property size. Planning's NRI/FSD and FCP exemptions were used to help format the application as an intake form. A document with a basic outline was rearranged based on the flow of information. A second format was created using the Reforest Montgomery Planning application form. It includes important information such as property owner contact information and property address.

Brainstorming Names

To brainstorm potential program names, similar programs were used as inspiration for creative

and practical names. Program mission, themes, and terminology were considered for appropriate vocabulary and possible names that fit the scope and goals of the new small forest protection program were created.

Creating a GIS Map

GIS mapping was used to identify eligible property owners. To create this map layer, the Planning Department provided relevant GIS layers that included property lines, forest cover, existing agricultural and forest conservation easements, and forest conservation plans. Various GIS tools were used to create a single map that included all the eligible property owners.

To begin, a new field in the Property Polygons layer titled “Acres” was created. The square footage of all property polygons in the county were converted to acres using the “calculate field” tool. Next, the “clip” tool was used to create a layer of property polygons that included only sections of property that overlapped with forested areas. After isolating the individual forested areas by property lines, a new field was created on the clipped layer, “Forest Acres.” The “calculate geometry” tool was used to calculate the total acreage of forested land on each individual property. The total forested area on each property is listed in the attribute table in a separate field from the entire property area.

Ultimately, the project requires forest acreage on individual properties. With the forested areas divided by property lines and the areas of these individual forests listed in the attribute table, a definition query was performed to only select forested areas that were greater than or equal to 0.5 acres and less than or equal to 5 acres.

After isolating forests between 0.5 and 5 acres on individual properties, the “union” tool was used to combine the different easement layers into one layer. This included agricultural and forest conservation easement layers. Since properties with existing easements are not eligible for the Small Forest Protection Program, the “erase” tool removed forest areas overlapping with existing easements from the attribute table. The erase tool was also used to remove forest areas overlapping with existing forest conservation plans. Eliminating eligible properties with existing easements and forest conservation plans resulted in a new layer, “Eligible Properties.” An additional definition query was performed on the “Forest Acres” field of the final layer to ensure that no properties smaller than 0.5 acres remained after adjusting for easements and conservation plans.

Montgomery Planning’s review requested an additional step to remove Maryland-National

Capital Park and Planning Commission (M-NCPPC) properties from the layer. A layer of park units was added, and a definition query was run to filter and select only park properties owned by M-NCPPC. The erase tool was used to remove forests in the Eligible Properties layer that overlapped with M-NCPPC park properties. We also removed properties that intersected with municipalities by performing an intersect between the Eligible Properties layer and the Forest Conservation Inspector Areas layer. The resulting layer is called “EligibleProperties2.”

As a final step, an attribute table was created to include properties containing forests between 0.5 and 5 acres, with no existing easements or forest conservation plans and no overlap with M-NCPPC park properties or municipalities. The attribute table retains information from the original property layer and includes property owner, including name, permanent address, and premise address, as well as the newly added “Forest Acres” field, identifying the acreage on each property that may be eligible for the program. This attribute table was converted into an Excel spreadsheet, which can be used to identify eligible property owners to contact for participation. This Excel spreadsheet, as well as a list of the steps that were taken, were sent to Montgomery Planning for final approval.

Results

Website Content

The webpage content was created to provide public information about the new program's purpose, including an explanation of the requirements to qualify, links to relevant documents (NRI/FSD checklist and Category 1 Forest Conservation Easement template), and the application form. The draft webpage was created as a Word document that collects the information that will be transferred to the website. The proposed webpage is shown in Figure 1.

Figure 1. Layout of the webpage content

Webpage content

Title:

[Program Name]

Photo:



Information on the Program:

When off-site mitigation is required the [Program name] allows developers to meet requirements at an off-site location within the County. This program focuses on smaller areas of forest (0.5-5 acres) and allows the property owner to apply for the program in order to be included in the program and connect with a developer seeking off-site forest retention to meet their Forest Conservation Plan requirements. The overall purpose of this program is to link property owners that own existing forest with developers that need to meet an off-site forest retention requirement.

Property Owner Information

Requirements to qualify for the program:

- **Size:** Presence of 0.5-5 acres of contiguous tree canopy within individual property lines
- **Location:** No conflicting existing forest easements or agricultural easements on the forested property
 - No existing approved Forest Conservation Plan
 - Forest is accessible for a forest conservation inspector

Application guideline

The steps to submitting an application to be a part of the [Program name] are listed below

- 1) **Submit the [Program name] Interest Form:** Property owners who are considering having the forest on their property to be a part of the new program should submit an interest form. Once submitted and reviewed the property will be inspected to ensure that it qualifies for the program
- 2) **Pre-Application Meeting:** Once the property has been inspected a pre-application meeting can be set up. This is an opportunity to ensure all requirements are met and address any questions about the program and the process of applying.

- 3) **Completing the Natural Resources Inventory/Forest Stand Delineation (NRI/FSD) and [new program] form:** The application process for the [new program] has two requirements. A NRI/FSD and [new program] application must be submitted and approved.
 - a) [Links to application forms]
- 4) **Recording a Category I Forest Conservation Easement:** Once the applications have been approved then a Category I Forest Conservation Easement must be recorded in land records to permanently protect the forest on your property.

Owner Benefits

- **Income:** [TBD]
- **Property/Environmental:** the forest that is protected by this program will continue to provide benefits to not only the owner but to community members and the environment.

Developer Information

When to use the [new program]: When off-site mitigation is necessary and developers must meet a calculated forest retention requirement for property under development to meet a Forest Conservation Plan requirement.

How to Purchase a Plot: [TBD]

Current Available Plots: [TBD]

Other

FAQ

Staff Contact

- Position
 - Name
 - Phone
 - Email

The webpage content consists of the new program name, illustrated by a photograph, and described in a short paragraph. The program description states: “When off-site mitigation is required the [program name] allows developers to meet requirements at an off-site location within the County. This program focuses on smaller areas of forest (0.5-5 acres) and allows the property owner to apply for the program to be included in the program and connect with a developer seeking off-site forest retention to meet their Forest Conservation Plan requirements. The purpose of this program is to link property owners who own existing forest with developers who need to meet an off-site forest retention requirement.”

The webpage presents program information in two sections: one for property owners and one for developers.

The property owner information includes a requirements section: “Presence of 0.5-5 acres of contiguous tree canopy within individual property lines, no conflicting existing forest easements or agricultural easements on the forested property, no existing approved Forest Conservation Plan, and forest is accessible for a forest conservation inspector.” This section also contains application guidelines including the following steps: “The steps to submit an application to the [program name]:

- 1) Submit the [program name] Interest Form: Property owners considering including forest on their property in the new program should submit an interest form. Once submitted and reviewed, the property will be inspected to ensure it qualifies.
- 2) Pre-Application Meeting: After inspection a pre-application meeting can be set up. This meeting is an opportunity to ensure all requirements are met and to address any questions about the program and the application process.
- 3) Complete the Natural Resources Inventory/Forest Stand Delineation (NRI/FSD) and [program name] Form: The application process for the [program name] has two requirements. A, NRI/FSD and [program name] application must be submitted and approved.
[include links to application forms]
- 4) Record a Category I Forest Conservation Easement: Once the applications have been approved then a Category I Forest Conservation

Easement must be recorded in land records to permanently protect the forest on your property.”

This section ends with “Owner Benefits” which states: “Income: [TBD]”
“Property/Environmental: the forest that is protected by this program will continue to provide benefits to not only the owner but to community members and the environment.”

The second section, for developers, provides information on when they need to use the new program. This section states: “When to use the [program name]: When off-site mitigation is necessary, and developers must meet a calculated forest retention requirement for property under development to meet a Forest Conservation Plan requirement.

How to Purchase a Plot: [TBD]

Current Available Plots: [TBD]”

An FAQ section and a staff contact information section will provide property owners and developers with more information if necessary.

Application Forms

Draft application forms were developed to meet the project objectives. After reviewing two Montgomery Planning forms, the intake form and the Reforest Montgomery form, two options for the new Small Forest Protection Program were created for property owners to apply to the new program.

The first application form (Figure 2), based on the intake application forms, includes information about the property, the owner, and other information such as the owner's representative or contract purchaser. It also includes a signature line for the applicant.

The second application form (Figure 3) is based on the online Reforest Montgomery Planning application and is more simplified and user-friendly. It collects property and owner information and asks yes or no questions to determine eligibility.

Figure 2. Draft New Program Application Form
(based on Montgomery Planning intake application forms and includes property and owner information, and an applicant signature)

1



[Program Name]

Montgomery County Planning Department

Maryland-National Capital Park and Planning Commission

Effective: (Date) _____

2425 Reedie Drive

Wheaton, Maryland 20902

www.montgomeryplanning.org

Phone 301.495.4550

Fax 301.495.1306

Site Establishment Application

CLEAR FORM

☐ Initial Application
 ☐ Final Application
 ☐ Revised Application
 ☐ Amendment

Date Application Submitted	Plan No. _____

Site Establishment Name: _____ Acres _____ (sf/43,560)

Location: (Complete either A or B)

A. On _____ (Street Name), _____ feet _____ (N,S,E,W, etc.) of _____ (Nearest Intersecting Street)

B. _____ (N,S,E,W, etc.) quadrant, intersection of _____ (Street Name) and _____ (Street Name)

Subdivision Information: (Complete either A, if located within a recorded subdivision, or B)

A. Lot _____ Block _____ Subdivision _____

B. Parcel _____ Liber _____ Folio _____; Parcel _____ Liber _____ Folio _____; Parcel _____ Liber _____ Folio _____

Applicant Team (Enter all that apply and submit separate supporting documentation as necessary)

Primary Contact

_____ (Company Name) _____ (Contact Person)

_____ (Street Address)

_____ (City) _____ (State) _____ (Zip Code)

_____ (Telephone Number) _____ (Fax Number) _____ (Email)

Owner

_____ (Company Name) _____ (Contact Person)

_____ (Street Address)

_____ (City) _____ (State) _____ (Zip Code)

_____ (Telephone Number) _____ (Fax Number) _____ (Email)

Owner's Representative or Contract Purchaser

_____ (Company Name) _____ (Contact Person)

_____(Street Address)
_____(City) _____(State) _____(Zip Code)
_____(Telephone Number) _____(Fax Number) _____(Email)

Other: _____
_____(Company Name) _____(Contact Person)
_____(Street Address)
_____(City) _____(State) _____(Zip Code)
_____(Telephone Number) _____(Fax Number) _____(Email)

Signature of Applicant (Owner or Owner's Representative)
_____(Signature) _____(Date)
_____(Name (Type or Print))

Figure 3. Draft New Program Application Form based on Reforest Montgomery Planning Application Form
(includes property and owner information owner, the property address, and requirements to qualify)

[Program Name] Application Form	
Name <i>(Required)</i>	
First	Last
Phone <i>(Required)</i>	
Email <i>(Required)</i>	
I am a: <i>(Required)</i>	
Options: Homeowner, Commercial Property Owner, HOA Representative	
I am interested in permanently protecting the forest on my property and	
☐ Yes	

☐ No

My property contains between 0.5 to 5 acres of contiguous tree canopy.

(This can be measured using the measuring tool at mcatlas.org.)

☐ Yes

☐ No

There are no existing forest easements or agricultural easements on the existing forest that I'd like to permanently protect.

☐ Yes

☐ No

☐ I'm not sure

There is no existing approved Forest Conservation Plan.

☐ Yes

☐ No

Address of Property:*(Required)*

Street Address

Address Line 2

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City

State / Province / Region

ZIP / Postal Code

I own, manage, or represent the property listed above.

☐ Yes

☐ No

I understand that: *(Required)*

I understand all of the following:

- To be considered, I must have a qualified professional prepare and submit a NRI/FSD to Montgomery Planning for review and approval.
- Existing forest on my property would be permanently protected with a recorded Category I Forest Conservation Easement, which would prevent development and clearing of the protected forest in perpetuity.
- If my property is subject to a development application that is required to comply with the Forest Conservation Law (Chapter 22A of the County Code), the Tree Canopy Law (Chapter 55 of the County Code) Law, or implement a landscape plan as part of a subdivision plan or a site plan, it is not eligible for this program.

Draft Letter of Solicitation

The draft letter of solicitation (Figure 4) provides a way to inform property owners about the Small Forest Protection Program and their potential eligibility. The letter follows a similar format to past Montgomery Planning letters: a large logo header, staff contact information, the date, and a placeholder space for addressing the property owner.

The letter's introduction describes the program and its requirements and benefits. It includes a brief description of why the program was created along with the context of the Montgomery County Forest Conservation Law and why developers need offsite forest retention areas. It proceeds to explain how property owners can play a role while also being compensated for permanently protecting forest on their land. The draft letter is explicit in the two major benefits to property owners, the conservation of forests and monetary compensation. The letter concludes with contact information and the website link. It closes by thanking the property owner for their consideration.

Figure 4. Draft letter of solicitation

(The letter introduces Montgomery Planning's goal, the program's value and legal context, the benefits to property owners, and guidance to next steps)

Montgomery Planning

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

2425 Reedie Dr 14th Floor, Wheaton, MD 20902
Kristin Taddei; kristin.taddei@montgomeryplanning.org
Mia Rothberg; mia.rothberg@montgomeryplanning.org

[Date]

Dear [address],

Montgomery Planning is committed to conserving our forests and reaching our climate goals while also keeping our development needs in balance. We are excited to introduce the [program name], wherein you as a property owner in Montgomery County, MD can play a vital role in helping us reach these goals.

Montgomery County's Forest Conservation Law requires developers to purchase offsite forest credits to meet forest mitigation requirements to comply with Forest Conservation Plans. To increase protection of the numerous small areas of forest in Montgomery County, we are inviting property owners to permanently protect forests on their land in exchange for compensation from developers that need to meet these requirements. To offset this problem, we are allowing property owners to permanently protect forests on their land and allow developers to purchase these areas so they can meet their requirements.

Your property has been identified as potentially fitting the requirements to apply for this program. Upon successful application, the forest on your land cannot be developed and you will receive monetary compensation from developers.

As property owners, you can become stewards of your land and be protectors of valuable forests that ensure the long-term conservation of our precious woodland ecosystems and get paid along the way.

If you are interested, please contact Kristin Taddei (information above). Visit <https://montgomeryplanning.org/> to learn more.

Thank you for your consideration. Please feel free to reach out to us with any questions as you consider your participation in this exciting program.

Sincerely,

Montgomery Planning



A GIS layer (Map 1) and attribute table (Table 1) were created to fulfill objective two, identifying potentially eligible properties for the new forest protection program using GIS methods. Map 1 shows 9,346 potentially eligible properties, county-wide, determined by the GIS methodology described above. Table 1 shows a selection of those properties along with their attribute information. The attribute table for this final layer retains the information in the original properties layer, including property owner name and address, and the site address. It also includes a new field for forest acreage, identifying the site's forested area that meets program requirements and make it eligible for participation.

Potentially Eligible Properties for the Small Forest Protection Program

Legend

- County Boundary
- Properties Final

Map showing Potomac County, Maryland, with potentially eligible properties for the Small Forest Protection Program. The map includes a legend, a scale bar (0 to 5 miles), and a north arrow. The county boundary is shown in black, and the potentially eligible properties are shown in blue. Major roads and towns are labeled, including Adamstown, Urbana, Frederick, and Gaithersburg. The map also shows the Potomac River and the Chesapeake and Ohio Canal National Historical Park.

Table 1. A selection of properties and their associated information from the GIS layer attribute table identifying potentially eligible properties for the Small Forest Protection Program

OWNERS_NAME	OWNERS_ADDR1	OWNERS_CITY	OWNERS_ZIP	Acres	Forest_Acres
HAWKENS MT LLC	358 HART RD	GAITHERSBURG	20878	1.146613704	0.755928188
MASKEW PATRICK	9208 ROSE ANNE PL	GAITHERSBURG	20877	1.596013594	1.127504288
SETO WILLIAM C & X-Y Y	12815 MAIDENS BOWER DR	POTOMAC	20854	2.105006364	1.040298017
HELLER HOWARD D & A S	12819 MAIDENS BOWER DR	POTOMAC	20854	1.815860448	0.863458049
GILL RAMINDER S & REVA S	5908 WILLOW KNOLL DR	DERWOOD	20855	4.517707131	3.603743506
MARYLAND NATIONAL CAPITAL	2425 REEDIE DR	WHEATON	20902	1.871056207	1.164154479
DRP MD 2 LLC	590 MADISON AVE 13TH FL	NEW YORK	10022	1.636952526	0.821704183
KING WILLIAM G	21820 CLARKSBURG RD	BOYDS	20841	5.870992529	2.73441716
CITY OF GAITHERSBURG	806 W DIAMOND AVE	GAITHERSBURG	20878	3.084166372	2.990891725
WASH METRO AREA TRANSIT AUTH	600 5TH ST N W	WASHINGTON	20001	8.299782165	0.799429335
ELMS AT PSTA LLC	1355 BEVERLY RD #240	MCLEAN	22101	3.083571517	2.63434918
MCPF KEY WEST LLC	C/O METLIFE REAL EST INVESTORS	WASHINGTON	20005	7.224386183	0.932650421
CLARKSBURG SQUARE HOMEOWNERS ASSOC	C/O PROPERTY MANAGEMENT PEOPLE	GAITHERSBURG	20879	2.475611763	2.325716519
MONTGOMERY COUNTY MARYLAND	10606 GREAT ARBOR DR	POTOMAC	20854	0.957665619	0.956881203
OREM WILLIAM D & K M	14415 TURKEY FOOT RD	DARNESTOWN	20878	2.048311809	1.597529011
VILARDO KATHERINE PARRY	14401 TURKEY FOOT RD	GAITHERSBURG	20878	3.483459086	2.731482997
SMITH LANCE	16637 SOUTH WESTLAND DRIVE	GAITHERSBURG	20877	2.20579917	0.580445381

Potential Names

Considering Montgomery Planning's mission and initiatives and the goals and audience of the Small Forest Protection Program, the following names are potential options for the new program:

- Small Forest Alliance
- Small Forest Conservation Co-op
- Montgomery Forest Partnership Small Forest Sanctuary
- Forested Land Preservation Cooperative Small Forest Landowner Cooperative
- The Forest Conservancy in Montgomery County
- Montgomery County Forest Conservancy
- Small Forest Protection Program

Discussion and Recommendations

Webpage Content

Research on other county programs was essential in the development of the webpage outline, the application form, the letter of solicitation, and program names. This research provided the language used in letters of solicitation and appropriate terminology to craft a captivating program name and to provide necessary program information. Additionally, research on Montgomery Planning's existing website and program webpages helped develop the webpage and application form. The "Montgomery County Forest Mitigation Bank Program" page was a structural model for the new program page. One difficulty in navigating this page were the many hyperlinks to reach a destination. For future webpages, we recommend aggregating the hyperlinks in a comprehensive way to create a simpler and more direct path for the user.

After clarifying that letters would be sent only to those who potentially qualify for the program (as identified by the GIS methods discussed above), as opposed to all county residents, the letter was tailored to these recipients. The application form research ultimately proved ineffective, as the client's desired layout isn't like the existing application form on the website. Throughout this process, we learned that fluid and timely communication between the client and the team was necessary for understanding the expectations. Research into other county programs was helpful in determining the most efficient way to communicate the complex requirements and development jargon in a simple way.

GIS Content

The project's second objective was to create a GIS map layer that identifies county property owners potentially eligible to participate. The corresponding attribute table for this GIS layer lists property owner contact information. After completing the described spatial analysis to create the GIS layer and attribute table, 9,346 potentially eligible owners were identified. This is a significant number of properties, much larger than originally anticipated, with a total acreage of 14,598.81 acres. This land could provide a substantial amount of additional forest availability for developers who need to meet offsite retention requirements under the Forest Conservation Law.

According to the attribute table and GIS layer, many of the eligible properties are in residential, commercial, or agricultural land use categories, with many properties located in neighborhoods. From the map, many of the properties appear to be in the county's eastern area

and in the south-central area of the county that borders the Potomac River. Several of these regions are high priority areas for forest planting and retention due to the community benefits and ecosystem services they provide. While all properties identified in the GIS layer should be considered for the Small Forest Protection Program, it is recommended that forests in these critical areas be given special consideration.

Other county initiatives, such as Reforest Montgomery and Tree Montgomery, emphasize the importance of trees in residential areas, especially in areas with high development (Tree Montgomery). Trees in urban and residential areas provide community and ecological benefits including shade, green space, air purification, wildlife habitats, and runoff reduction. It would be beneficial to protect existing forest in these areas to preserve already limited forest and provide community benefits as well as provide opportunities for developers to meet forest retention requirements. For example, according to the GIS layer, there are several potentially eligible properties in the Rockville and North Bethesda areas that should be considered for the program.

In addition to urban areas, there are other types of forests that are a priority for protection. This includes riparian forests, which help improve water quality in local streams by filtering pollutants (Forest Preservation Strategy). Water quality is significantly reduced when developed areas surround streams, but forest in these areas can limit those effects. There are a significant number of properties in the GIS layer along the Potomac River and its tributaries that would be highly beneficial to include in this program. Upland forests are also of particular concern; these areas at the tops of hills or slopes help prevent runoff and erosion (Forest Preservation Strategy).

Limitations and Areas of Further Study

Webpage Content

When conducting research into websites and application forms, there were only a few resources from Montgomery Planning based on current easements and the Forest Mitigation Bank Program. It was difficult to decide which features would be essential to both the website and the application forms. For example, should a Q&A section be available on the website and, based on the intake form, should there be a subdivision section for the application form?

Another limitation was formatting the intake application form to visually represent the result. For example, the black and gray color-blocked boxes and sections to be checked by the applicant and the lines for applicants to fill with their information. The color-blocked sections showed on the outline, but the boxes and the information lines had faults. Also, in the outline, the check boxes are unable to be physically checked or selected, which may lead to formatting errors for the webpage developers at Montgomery Planning. The information lines were also unable to be formatted correctly in the Word document. For example, the subheadings appear next to the lines rather than under them.

When formatting the website deliverable, it was unclear if a developer section should be included, thus it was difficult to research and understand which information and hyperlinks should be added to this section. This section was added to the deliverable as a placeholder with suggested information to be included. Although a developer section was not requested in the scope, it could be an area of further study, as it could help the flow of information for the new program.

GIS Content

One of the first obstacles in creating a GIS map was that the necessary information for the attribute table wasn't always readily available online in the appropriate format. Some layers, such as property boundaries and easements, were available on MCAtlas. However, they didn't always include the correct metadata or the correct fields for the requested attribute table. We requested files from the Montgomery Planning GIS specialist and received a Geodatabase of necessary files to solve this issue. A lack of direct access to the files remained an obstacle as other edits to the GIS layer were requested, requiring additional files. However, the GIS layer and attribute table contain all the requested information as of the last update from the client.

Another obstacle was narrowing down the number of eligible properties according to client expectations and separating them into usable categories. Homeowner type, for example, isn't readily available in the GIS attribute tables, so separating properties into categories based on homeowner type isn't straightforward. The high number of properties also made it difficult to identify and separate property types manually. The final attribute table should be refined to view potentially eligible properties more easily.

The largest remaining obstacle is not being able to see if the properties are accessible to forest inspectors. Eligible properties must be accessible, however we struggled to determine a way to rule out inaccessible properties using GIS. This evaluation may have to be done manually, most likely through in-person property visits when property owners apply to the program.

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