

Increasing Forest Cover in Maryland's Developing Watersheds

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The Center for Watershed Protection is partnering with Frederick County to do a study of forest cover in the Linganore watershed that will serve as a template for forest cover analyses in other Maryland developing watersheds. Anticipated outcomes from the study include the recommendation of a Tree Canopy goal for the Linganore watershed, priority properties for reforestation and a plan for goal implementation.

The primary steps involved in the study, which is beginning in January include:

- Estimate potential forest loss in the pilot watershed under full build-out.
- Develop forest cover coefficients for use by the County and planners in the state to estimate future forest cover.
- Identify priority forest conservation and reforestation sites in the pilot watershed.
- Formulate a numeric forest cover goal for the pilot watershed, and make specific recommendations for meeting the goal.
- Work closely with County staff to ensure recommendations are integrated with the goals and Action Plan for the Linganore Creek TMDL and explore opportunities for linking forest cover goals with TMDL implementation (e.g., include forest cover goal as part of watershed overlay zone, fund reforestation projects through water utility fees).
- Present results to the Board of County Commissioners to educate them about the project and encourage them to make forest conservation and reforestation a priority in Linganore Creek and the County as a whole.
- Develop educational materials about the importance of forests, their link to drinking water quality, the pilot project in Linganore Creek, and work with local partners to incorporate into their education programs.
- Hold a half day workshop to present results of study to County staff and provide training on how to use the forest cover coefficients in other watersheds, methods for prioritizing and evaluating forest conservation and reforestation sites, and discuss how to get to implementation.
- Disseminate project results to watershed and county residents as well as other Maryland communities.

In refining the project approach, staff will project future forest cover using the Leafout Analysis method – a GIS analysis that estimates future forest cover in a watershed, and can also be used to evaluate the effect of different watershed protection scenarios on future forest cover. Forest cover coefficients (FCCs) will be developed for various zoning categories in the County using current land cover data, property boundaries, and other GIS layers. FCCs represent the proportion of a parcel for a particular land use that contains forested land. GIS data will be evaluated for the watershed to identify potential sites for forest conservation and reforestation.

Staff will analyze a number of layers of geographic information from the County's Data including:

- Property boundaries and associated parcel data
- Current land cover
- Zoning
- Protected land – parkland, conservation easements/zones, stream buffers, floodplains, wetlands, steep slopes, etc.
- Recent aerial photos
- Building layer
- Roads/highways
- Streams, lakes, ponds
- Topography
- Forest cover (FRO)
- Local environmental and developmental regulations

They will also review existing watershed information, reports, and initiatives including:

- Linganore Source Water Protection Plan
- Action Plan for Linganore SWPP
- Linganore Sediment Study
- Overview of Forest Resource Ordinance
- Lower Linganore Watershed Assessment
- Linganore Retrofit Study

An education and outreach campaign will be undertaken to disseminate the results of the pilot study, increase awareness and support for this and subsequent phases of the project at multiple levels within the County government, and increase awareness of the importance of forests throughout the County, specifically in relation to drinking water quality and regulatory requirements such as TMDLs.