

**Plan2040 – General Development Plan
Citizens Advisory Committee
November 7, 2018 – 4:30pm
Chesapeake Conference Room, 2nd Floor
2664 Riva Road, Annapolis, MD
Meeting Notes**

Members Present: Leo Wilson (Chair), Hamilton Chaney, Christy D’Addario, James Fraser, James Krapf, Amy Leahy, Michael Linynsky, Patricia Lynch, Caren McPhatter, Douglas Nichols, Kerry Petz, David Povlitz, Elizabeth Rosborg, Allan Straughan

Public: Jerry Pesterfield, Ellen Moss, Harry Sinclair, Marie DelBianco

County Staff: Philip R. Hager, Cindy Carrier, Patrick Hughes, Mark Wildonger, Don Zeigler, Andrea Gerhard, Erik Michelsen, Chris Murphy, Barbara Polito, Billy Gorski, Kelly Krinetz

Convene

Mr. Leo Wilson, Chair

The meeting was called to order at 4:33pm. Committee members were requested to specify how future meeting materials should be received on a form that was circulated.

Mr. Hager reiterated the importance of the Committee and noted that their participation is valued. He also announced a new Commercial Revitalization initiative that will be led by Ms. Lynn Miller in partnership with the Anne Arundel Economic Development Corporation (AAEDC). She will still be a part of the Office of Planning and Zoning (OPZ), but her office will be located within AAEDC. The initiative is a joint effort to target and promote restoration, revitalization and re-development within existing developed neighborhoods in the County. The goal is to lessen the footprint of development activities and concentrate it in a small of area already served by infrastructure. The program will create greater efficiency, opportunity, and investment to these areas.

The October 3, 2018 meeting notes were approved with corrections to members’ affiliations. The October 17, 2018 meeting notes were approved with an addition that “upon moving the firehouse out of the Herald Harbor community, they would be a candidate for an EMS substation”. The meeting notes will be posted to the www.aacounty.org/Plan2040 website shortly.

Review of Environmental Protection and Resource Conservation Background Report

Mr. Erik Michelsen, Administrator, Watershed Protection and Restoration Program, Department of Public Works

Mr. Billy Gorski, Program Planner, Agricultural Land Preservation, Department of Recreation and Parks

Mr. Mark Wildonger, Senior Planner, Long Range Planning, Office of Planning and Zoning

A watershed is an area of land that drains to waterbody. There are twelve watersheds in the County. One responsibility of the Watershed Protection and Restoration Program (WPRP) is to prepare detailed watershed assessments which examine the different characteristics, like land

use, of each watershed and detail issues such as utility exposure, erosion, or illicit dumps in order to determine stream health. These assessments can be found online at:

<https://www.aacounty.org/departments/public-works/wprp/watershed-assessment-and-planning/watershed-studies/index.html>.

The County also has an online map to view environmental information regarding watershed studies, stream assessment survey as well as sub-watershed and stream priorities for restoration and preservation. The map can be found here:

<http://gis-world3.aacounty.org/HTML5Viewer/index.html?viewer=WPRP>

There are regulatory mandates to maintain clean water. Total Maximum Daily Loads (TMDL) can be considered a “recommended annual intake” of pollution required by the Clean Water Act. The latest standards were set in 2010 and must be achieved by 2025, of which the County is on a healthy trajectory. The reductions are required for nitrogen, phosphorus, and sediment. Data is collected by variety a sources, but mainly from models created by the Environmental Protection Agency (EPA). There is some empirical sampling and data collection at the wastewater treatment facilities, but this occurs on a case by case basis. Sampling of stormwater may also occur during different conditions, like high precipitation events.

The WPRP administers the Municipal Separate Storm Sewer System (MS4) permit issued by the Maryland Department of the Environment (MDE). These permits are issued to each county with a population over 100,000. Anne Arundel County is currently in the midst of five year cycle which will end in 2019 at which point it will roll over for another five years. The permit requires treatment of 20% of the untreated impervious area in the County during the permit cycle. To date, the County has committed over \$250 million stormwater restoration efforts.

The County has also invested approximately \$252 million to upgrade all of its seven water reclamation facilities (WRF) to Enhanced Nutrient Removal (ENR). The County has approximately 42,000 privately-owned septic systems. These septic systems, even when functioning properly, can contribute nitrogen pollution to nearby waterways. Initial estimates to convert 20,000 septic systems may cost approximately \$1.5 billion. Due to the high cost, the County developed a Septic Task Force, with representatives from the Anne Arundel County Department of Health, to assist with strategic planning efforts developing appropriate policy approaches in the development of the septic conversion program.

There are approximately 1,750 miles of streams in the County that feed the local waterways. These streams range from natural systems to scoured stream channels to heavy armament. The County is working to restore unhealthy streams and buffers to more naturally functioning systems. The historic approach was armoring streams in the form of concrete channeling. By removing the concrete and restoring it to its more natural state, the stream can perform more ecological functions at a higher rate and even become a community amenity. The County has an online map so residents can find the waterway improvements project in their neighborhood. The map can be found here:

<http://annearundelmd.maps.arcgis.com/apps/webappviewer/index.html?id=e7e7fb6733e448a8809938140bed9e18>

Anne Arundel County requires floodplains, identified as part of the subdivision process, to either be deeded to the County or permanently eased as open space. Regulations such as a 100-foot stream buffer is required for all perennial and intermittent streams and new structures in floodplains are required to be elevated above the 100-year flood level to minimize adverse environmental impacts and protect the safety of the public. The County uses high resolution Light Detection and Ranging (LIDAR) data to determine topography. This information is shared with OPZ to better understand the County's natural resources and determine how to provide additional protections.

There are two types of wetlands found within the County. Non-tidal are found often along stream corridors and are not connected to tide water. These wetlands generally have a 25-foot buffer against development to ensure there is adequate filtering and percolation of stormwater runoff from development. Bogs, a type of non-tidal wetlands and primarily found on the north side of the Magothy River, have high quality and unique plant and biological communities. Due to their importance, they have an enhanced 100- and 300-foot buffer protection against development.

Tidal wetlands are generally located along the fringe of marshes of tidal waters. Strategies to support these resources include bank stabilization and living shorelines to encourage healthy biological communities and to dampen onshore water energies. A 100-foot buffer is required to protect these resources.

Steep slopes, those with a 25% or greater slope or a 15% or greater slope in the Critical Area, have protections within the County Code. Development should not occur on steep slopes or within 25-feet of the top of steep slopes. These regulations are meant to protect the safety of the public and protect property owners by preventing development from disturbing vegetation, undermining the soil, or adversely impacting adjacent property owners from unanticipated change in stormwater runoff.

The Agricultural Land Division of the Department of Recreation and Parks (DRP) facilitate three programs – the County's Agricultural and Woodland Preservation Program, the Maryland Agricultural Land Preservation Foundation (MALPF), and the Maryland Department of Natural Resources Rural Legacy Program. The goal of these programs is to limit development in the rural areas and preserve agricultural and woodland areas. Landowners interested in participating in these programs apply and are enrolled based on funding and site conditions. When enrolled, the landowner maintains ownership of the property, but future development rights are extinguished. The easement is for perpetuity and runs with the land.

There are a few distinctions among the programs. The Rural Legacy Program and MALPF require that protected properties are within the Rural Legacy Area and the Priority Preservation Areas, respectively. Participation in the County's Agricultural and Woodland Preservation Program and the MALPF program also require a soils analysis and enrollment is based on whether the site has at least 50% of Class 1, 2, or 3 soils. The soil data is based on a United States Department of Agriculture survey where Classes 1 - 3 are the most productive soils. The Rural Legacy Program is focused in preserving farmland and natural resources and does not require a soil analysis. All three programs require documentation to be updated to ensure the property is still in compliance with the program guidelines.

There were formerly provisions in these programs that allowed the easements to be purchased back; however, these policies have since ended and landowners are no longer able to buy back an easement on their property.

The Critical Area was established in 1984 as a comprehensive resource protection program for the Chesapeake Bay and its tributaries. The goal of the program is to minimize adverse water quality impacts, conserve plant and animal habitat, and address land use policies for development in the Critical Area. The Act created a special planning area called the Critical Area, and identified this area as all land within 1,000 feet of the mean high water line of tidal waters and/or within 1,000 feet of the landward edge of tidal wetlands, and all waters of and lands under the Chesapeake Bay and its tributaries. The Critical Area Commission oversees the development and implementation of local Critical Area programs.

The State is in the process of updating the Critical Area boundaries based on higher resolution aerial imagery and base elevation data. Once the State completes its analysis, the County will adopt its set of maps. The State is conducting this analysis statewide and when complete will have a seamless Critical Area map across the State. The State will notify the property owner if there is 1% or greater change, regardless of whether it has been added to the Critical or removed. The notifications are anticipated to be sent in the next few months. The State will also be holding a series of at least four meetings to review the process, the technology used, and why there are changes. Draft maps will then be sent to municipalities and must be adopted by the County Council within two years; however, the County plans to accelerate this process.

The County reviews all subdivision, rezoning, special exception, and variance applications pertaining to property located within the Critical Area for impacts on water quality and habitat. Habitat Protection Areas (HPA) are wildlife and plant habitats of particular significance due to their uniqueness, rarity, or possible future diminution.

The Critical Area buffer is a minimum 100-foot wide vegetated buffer that is to be protected and maintained. This buffer, a designated HPA, is geographically located within the Critical Area and encompasses lands within 100 feet of mean high tide or the edge of tidal wetlands and tributary streams. The buffer is expanded when steep slopes, hydric soils, highly erodible soils exist contiguous to the 100-foot buffer. No development activity is permitted within the buffer without prior approval of the County.

There are Critical Area Buffer Modification Areas that allow certain flexibilities to uses within the Critical Area due to lot or site conditions. For example, the Critical Area requires a 100 foot vegetated buffer; however, a landowner's lot may be 100-feet or less in depth which would otherwise render the site unbuildable or un-improvable. State legislation allows counties to propose regulations to modify criteria where resources may be compromised or the area is not a functioning buffer.

The Critical Area is classified into three areas – the Intense Development Area (IDA) which includes lands where existing or adjoining uses were predominantly higher density residential, commercial or industrial and can be developed with medium to high-density housing,

commercial, or industrial uses, according to the underlying zoning designation; Limited Development Area (LDA) which are moderately developed lands and can be developed with low to medium density housing, commercial and small industrial uses; and Resource Conservation Area (RCA) which is primarily undeveloped or low density developed lands.

The Forest Conservation Program was created in 1991 to meet the requirements of the Maryland Forest Conservation Act of 1991. The Department of Inspections and Permits administers the reforestation and afforestation requirements of the Critical Area Program and the Maryland Forest Conservation Act. The requirements apply to new subdivision plans on sites that are greater than 40,000 square feet. Applicants submitting a subdivision plan or permit application must include a forest stand delineation and a forest conservation plan that: identifies, delineates and characterizes forested areas, specimen trees, floodplains, erodible soils, and other sensitive areas on the site; establishes forest retention areas or reforestation areas that meet a minimum conservation threshold; and protects these areas through forest conservation easements. Applicants are required to complete a forest conservation worksheet as part of the application. A list of Critical Area and Non-Critical Area Offsite Reforestation Banks can be found on the County's website at: <https://www.aacounty.org/departments/inspections-and-permits/code-compliance/index.html> or by contacting the Department of Inspections and Permits.

Landowners and community associations can apply to participate in the reforestation projects through the Forest Conservation Fund. As of 2014, when the last aerial analysis was conducted, there are 102,614 acres of forested areas within the County, which equates to approximately 40% of the land cover.

The County's current Greenways Master Plan, adopted in 2002, is a functional master plan that identifies the interconnected network of protected corridors of woodlands and open space. The master plan identifies strategies that will help protect ecologically valuable lands, provide open space, recreational and off-road transportation benefits for people, provide adequate habitat to support healthy populations of plant and animal species, and improve water and air quality. In 2010, the County completed an implementation report that summarized progress on implementation of the 2002 Greenways Master Plan.

In 2016, the County began the process of updating the Greenways Master Plan to include additional criteria. This draft plan will be renamed the Green Infrastructure Master Plan. The expanded criteria to be included in the green infrastructure network includes the following properties or characteristics - Federal, State and County parks; public and private lands acquired for preservation; agricultural and forest conservation; floodplain, wetland and open space easements; trails and other outdoor recreation; historic and cultural resources; land zoned Open Space; Undeveloped lands that meet the minimum criteria for size, protection status, and land use characteristics. The plan maintains that hubs should be at least 250 acres and corridors should be at least 200-feet wide. Due to better technology, the County was also able to conduct a parcel-based analysis.

The proposed Green Infrastructure Network is approximately 109,000 acres and 66% of that land is protected. It should be noted the protected and unprotected statistics refer to land only within the Green Infrastructure Network and not the entire County.

Review of Water Resources Background Report

Mr. Chris Murphy, Engineer Administrator, Technical Engineering, Department of Public Works

The County's water system is divided into 12 pressure zones or service areas. Eight of the 12 zones are interconnected, which enables the County to transfer water. Other areas are served by the City of Annapolis, Fort Meade or are designated as Rural and use private wells. There are 15 well fields and 57 water supply wells. The County permitted an annual withdrawal of up 57.7 million gallons a day. The County does not reach that allowable maximum, but is the largest groundwater user in the state.

The County primarily uses water found in the sloped aquifer layers beneath the water-table aquifer. The major aquifer recharge areas are found in the northern part of the County and in Howard County.

The County routinely conducts studies to ensure there is an adequate water supply. In 2016, the County completed a Comprehensive Water Strategic Plan (CWSP) which was incorporated into the 2017 Water and Sewer Master Plan (WSMP). The WSMP identifies future projects, whether they are planned by a developer, a capital improvement funded by the County, and future projects which are not funded. The Sewer and Water Allocation Management and Planning System (SWAMP) is a computerized system which provides the County with an accurate means of tracking water and sewer system capacity and is a useful tool in assessing current development plans to ensure water and sewer capacity is available for the proposed development and also as an engineering tool when conducting strategic planning, recommending capital improvements and preparing updates to the County's Water and Sewer Master Plan.

The 2016 CWSP developed baseline of 2010 demands, 2020, 2030 and buildout (2087) water demands for the County based on zoning projections. The analysis resulted in the sizing and siting of future system facilities including major transmission mains, pumping stations, water treatment facilities and storage facilities. For the buildout scenario, emphasis was placed on reducing reliance on the Baltimore City supply. The resulting recommended capital improvement projects (CIPs) were then used to develop a long term capital water development plan. Particular largescale CIPs were phased over several years based on demand projections and capital budget limitations. Additional studies include Projected (2086) Groundwater Withdrawals on Management Water Levels and Domestic Wells and Effects of Increased Withdrawals from the Aquia Aquifer on the Mayo Peninsula. More information about the Water and Sewer Master Plan can be found here:

<https://www.aacounty.org/departments/planning-and-zoning/long-range-planning/water-and-sewer/index.html>

The County has developed a chart illustrating the production, current demand and projecting the demand based on several build-out scenarios. The County takes the most conservative projection; however, the analysis is re-run every ten years to ensure accuracy and demand will be

met. The 2016 CWSP recommended that any major investment in new supply sources be made only within the eastern or central portions of the County.

According to the WSMP, the ultimate area to be served by public sewer is approximately 50% of the County. Of the 11 sewer service areas, eight are served by facilities owned and operated by the County. Two of the service areas have conveyance systems that are operated and maintained by the County, but the treatment facilities are located in Baltimore City and Calvert County. Piney Orchard is serviced by a private entity.

From 2010 to 2014, there was an increase in annual total nitrogen discharges, presumed to be from construction and enhancements at the WRF. However, due to improvements at the WRF, these numbers have decline below the National Pollutant Discharge Elimination System (NPDES) cap. The discharge is anticipated to increase slightly until 2020 when the amount of discharge will level off due to slowed growth, better technologies, and more efficient household systems. Statistics to date from 2018 illustrate the WRF are performing well and stay well under the allowable threshold even during peak demands.

Anne Arundel County has a total of approximately 41,000 Onsite Sewer Disposal System (OSDS) of which approximately 38,700 serve residential properties and 2,300 serve non-residential properties. It is estimated that septic systems in the County annually contribute approximately 700,000 pounds of total nitrogen per year to the Chesapeake Bay Watershed. The average load for an OSDS is 7-19 pounds of total nitrogen a year. The typical septic tank effluent of total nitrogen is approximately 40 milligrams per liter. For comparison, effluent from a treatment plan is 4 milligrams per liter.

The County conducted an OSDS Evaluation Study and Strategic Plan in 2008. Nitrogen loads were calculated for all existing OSDS Countywide with the study recommending a treatment strategy for each OSDS. The treatment strategies used were: Sewer System extensions to Enhanced Nutrient Removal Facilities, cluster wastewater treatment facilities, upgrade individual OSDS to Best Available Technologies (BAT), and no near-term action, which consists of low-density, low-nitrogen delivery onsite systems.

A recently formed Septic Task Force completed a report in June 2018 that developed recommendations on how to connect landowners formerly on a septic system to public sewer. The task force met over the span of a year and met with met with stakeholders, including environmentalists, developers, community members, and county staff. The Task Force's goals included developing a suite of recommendations that will inform decision making, identifying near-term strategies to support the effort, identifying long-term strategies and approaches, and identifying areas requiring additional investigation. To address these goals, the Task Force was broken into three working groups – land use, fiscal, and policy to analyze the specific aspects of the issue.

The major highlights from the task force include: a new septic connection process and participation requirement - mandatory versus voluntary; develop prioritization to focus on high impact and cost-effective locations; cost-sharing and subsidies and develop an incentive system; examine alternatives to centralized public sewer; public outreach and education is critical to

determine the public interest and valuation of sewer; maintain consistency with smart growth policies and consider impacts related to infill development; develop a program budget and get long-term funding commitments; and identify revenue approaches, though not recommending a new separate fee, and exploring financing timelines. Since the completion of the report, the County has hired a consultant to develop strategies, such as grant funding opportunities, to implement recommendations from the report.

As part of its outreach strategy, The Department of Public Works (DPW) publishes an annual water quality report that is included in a customer's water bill and partners with schools and non-profit organizations, like the Arlington Echo Outdoor Education Center, to educate the youth about water resources.

Ms. Rosborg requested that presentations be sent in advance so the Committee can review prior to the meeting. She emphasized the protection, supply, and demand of water resources is critical to the Committee's work and how it relates to land use. She also sought clarification to how property owners to maintain stormwater management facilities on their property. Mr. Michelsen said there is a three-year inspection by the County, but property owners are welcome to contact the DPW for additional assistance.

Mr. Fraser cautioned that septic may not necessarily be worse than WRFs depending where the septic system is located. Mr. Michelsen clarified that despite location, septic systems are the single biggest contributor of total nitrogen to local waterways.

Next Steps

Mr. Leo Wilson, Chair

Mr. Wilson acknowledged the Committee is receiving a great amount of information during this background report phase and reiterated the intent is for this phase to set the foundation. The Committee should be considering the concerns the community has and how to handle future growth, treat wastewater and stormwater, and ultimately help prioritize the elements, or in other words how they would like to see funding spent. The intent is that the Committee provides a community-based touch to the General Development Plan.

The meeting on November 21st has been canceled. This meeting date will be made up on January 30th. The next meeting date is December 5th. The Committee was encouraged to review the next set of background reports and send questions to OPZ staff in advance of the next meeting. The meeting adjourned at 6:37pm.