

Newsletter #3
February 2002 through December 2003

The project study team along with the Citizens Advisory Committee(CAC) worked on the management recommendations and finalizing the watershed management plan during this time period.

Results From the Computer Model:

Two Meetings were held in 2002 with the CAC and the project study team. The first meeting was held on March 27, 2002, at which time the U.S. Army Corps of Engineers presented and discussed the graphs of the model calibration and the variations in nitrogen, phosphorus and sediment loads over a two year time frame. The graphs included comparisons of:

- (1) 2000 land use and a completely forested condition, which would be considered a pristine or best case scenario, and
- (2) 2000 land use and 2020 land use.

Additionally, profiles for each of the nine non-tidal subwatersheds of Mattawoman Creek were shared with the CAC. Each profile contained a location map, topography map, natural resource map, 2000 zoning and land use maps, and three enhanced scenarios were discussed.

At the second meeting held on September 2, 2002, Mr. Larry Coffman of Prince George's County Department of Environmental Resources gave a presentation on the Prince George's County watershed protection and restoration efforts. The Corps then discussed the results of scenarios, as predicted by the computer model.

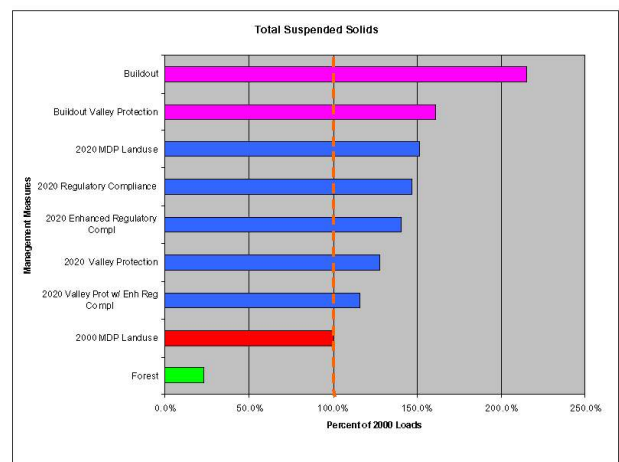
The adjacent graph from the August 2003 report shows scenario results for sediment. All of the scenarios are compared to the condition in 2000 which is the red bar, and evaluated as a percentage.

For example, the top bar represents buildout, or maximum development potential under current zoning practices, which is shown to contribute more than 200% of the year 2000 sediment load.

Draft Final Management Plan Completed:
The draft final Management Plan was completed in August 2003 and distributed to the CAC for review.

Based on analysis of the nitrogen, phosphorus and sediment reductions predicted by the computer model runs of the scenarios, the Plan makes three recommendations:

- 1) The stream valley should be delineated and protected, through zoning category changes, acquisition, or ordinance changes. This area could be used to develop a greenway or park system designed to connect the Mattawoman estuary to the Waldorf central business district.*See below for information.
- 2) Site planning on future development should implement low impact design techniques, minimize the amount of impervious surfaces and promote stormwater disconnects. New housing developments should emphasize many small-scale stormwater management practices, rather than one single stormwater management pond and emphasize tree cover as a main stormwater management component.
- 3) Existing developments should be examined for stormwater retrofit opportunities, including the retrofitting of existing commercial sites and housing developments in Waldorf. The technology exists to increase the stormwater management within small-scale housing and commercial areas. These techniques should be encouraged through ordinances, public workshops, and re-development projects.



The CAC provided comments on the draft Plan at the September 24, 2003 meeting. With all CAC members in agreement, the plan was forwarded to the Charles County Commissioners for review in December 2003.

*Since 1992, the County has implemented a stream valley protection program that incorporates an overlay zone, called the Resource Protection Zone. This overlay zone protects streams, adjacent wetlands, floodplains and steep slopes, by limiting disturbance within the zone. Recommendation #1, mainly differs from the existing Resource Protection Zone, by expanding the area of protection to the top of the stream valleys instead of the current 100' maximum extension for slope protection.

Model Limitations and Assumptions:

The following key assumptions were made to develop future land use and growth, and should be noted when reviewing the plan.

1. Future growth rates were developed by Maryland Department of Planning for 2020, based on current zoning and estimated housing demands.
2. All modeling was based on best available data, including data collected by the Smithsonian Environmental Research Center for weekly flow data. This data was used for calibration but is not a complete, long-term data set.
3. Build-out is based on 2002 MDP zoning characteristics, with the assumption that 80% of zoned area will be entirely developed according to its zoning density limits. This is implied for "Build-out" scenario.
4. Towson University bases impervious surface calculations on a review of existing literature and combination of direct measures from Landsat imagery and classification conducted. For current estimates (year 2000), the Towson data is preferred for its accuracy. However, this data cannot be projected to predict future (year 2020) scenarios.
5. Future analysis is based on current zoning. If zoning changes occur, these will have corresponding effects on growth rates and future land use parameters.
6. Scenarios 6 and 8 are based on rates established

by other model runs, not actual model runs.

7. The 2000 MDP Land use is based on 1997 aerial photography.

8. The Build-out is based on zoning densities and does not include current best management practices. However the scenarios which do incorporate bmps show benefits of less than 10% difference.

Where to get more information:

The Draft Mattawoman Watershed Management Plan can be downloaded by clicking on the link.

A presentation of the Plan for the Charles County Commissioners by the U.S. Army Corps of Engineers is scheduled on Tuesday, February 9, 2004 at 2:00 p.m. in the Commissioners meeting room.

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