

**CECIL COUNTY COMPREHENSIVE PLAN
WATER RESOURCES SUBCOMMITTEE
MEETING MINUTES
6th August 2008**

Attendance

Member	Present
Eileen Butler (VCh)	Y
Dan Derr	Y
Robert Gell	Y
Randy Hutton	Y
Ann Jackson	Y
Phyllis Kilby (Secr.)	
Daniel Polite	Y
Vic Priapi	
Rupert Rossetti (Ch)	Y
Henry (Dick) Shaffer	
Chuck Smyser	Y
Tony DiGiacomo (Staff)	Y
Ben Sussman	
Maggie Cawley	

Other Attendees	Affiliation
John Leocha	MDP
Janice Outen	MDE
John Higby	ARRO
Joseph DiNunzio	Artesian
Scott Towler	Artesian
Chris Rogers	URS
Mark Prouty	URS

Call to Order 18:35 6th August 2008, County Admin Building - Perryville Room

Approval of Minutes

- Minutes for July were approved.

Water & Wastewater Franchise Agreements

- Tony DiGiacomo gave us a brief synopsis of the recently announced Water & Wastewater Franchise Agreements, with clarification & confirmation from Joseph DiNunzio, Artesian.
 - The first Comprehensive Plan, in 1960, recognized the need for water & sewer infrastructure in the growth area
 - Successive Boards of County Commissioners have wrestled with the issue ever since
 - Work with the towns has not yielded results to this point
 - The current Board of County Commissioners started along the privatization route last December, and this is the outcome of those efforts and subsequent negotiations
 - Benefits include:

- moving a significant portion of discharge out of the Chesapeake and into the Delaware Bay. 90% of the area that would have been served by Elkton West will go to the Delaware Bay.
 - providing (~1.2 mgd equivalent) nutrient credits for Seneca Point by taking failing systems out of service. CECO, Cherry Hill and the Highlands would all go to Meadowview, and thence to the Christina River
 - Freeing up debt service for other needed investments
 - Artesian gets all the questions and complaints, not the Commissioners
 - In the event of a drought, it is Artesian's phone that will ring
 - Artesian provides economies of scale
 - Artesian becomes a county taxpayer
 - This area is not governed by either the Delaware River Basin Commission or the Suquehanna River Basin Commission, so no inter-basin transfer has to be approved
 - For water transfers from Chester Water Authority, they are covered under existing agreements
 - Artesian is a true regional concern, and serves both sides of the state line
 - These agreements will not be finalized until end of year
- Q&A & Comment (some embedded in the points above, where it seemed to make sense to do so):
 - The state would like an opportunity to review the Master Water & Sewer Plan updates and to review the contracts. There is a change in both ownership and scale.
 - Have you got all the permits you need from Delaware?
 - No. We believe we know what they will allow us, but that has to be resolved once the initial agreement is signed
 - We believe we can process 4.8 mgd through Meadowview under the Christina River TMDL
 - MDE is very concerned about regional water supplies and has commissioned a study of the Coastal Plain aquifers by USGS, to assess the cumulative impact of appropriations
 - Delaware Geological Survey is envious!
 - Elkton West "goes away" and will be replaced by an expanded Meadowview facility
 - Should we as a subcommittee take a position on whether a private company can do things better than a public entity?
 - Long discussion ensued. Outcome was that it is really not in our scope or our brief to make a recommendation directly to the Commissioners. Would need to go through the Oversight Committee. Individuals are most certainly able to make their opinions known to the Commissioners
 - There are many concerns and questions still to be addressed.

- The Mayors letter to the Commissioners was an expression of concern about the process, and the lack of upfront communication through the Council of Governments.
- The State reps, Janice Outen and John Leocha, expressed concern about the process. Typically, the Comprehensive Plan comes before the Water & Sewer and Facilities Planning and this is not being honored in this case. The better approach would be to be informed about growth before developing or amending the Master Water & Sewer Plans. This seems to be the reverse.
 - It is a question of chicken and egg, we've been talking about this for 20 years, it is time to act.
 - Having this in place will create the TDR receiving areas we have been looking for.
- Land Use subcommittee will take up a proposal to recommend that infrastructure will be restricted to the Growth Area, not outside it.

Spray Irrigation

- Chris Rogers and Mark Prouty of URS provided us with an introduction to Spray Irrigation and the results of a quick desktop analysis of digital soils within a radius of 5 miles of Seneca Point
- See slides (to be attached)
- Another tool in the toolbox; something that should be considered when seeking to manage within the nutrient caps
- Compared and contrasted three wastewater disposal alternatives:
 - Stream Discharge
 - Subsurface Discharge to Groundwater
 - Spray Irrigation
- Key Considerations (slide 8)
 - Up to 80+ inches of water can be applied to good soils in a year
 - Have to keep separation between the surface and the groundwater, to ensure that aerobic activity continues
 - In MD, the limit is 10 mg/l N to reach the groundwater
 - If streams are impaired (i.e. on the 303D List) this is reduced to 0 mg/l to reach the groundwater
 - If the zero is achieved, then the discharge does not count against the nutrient cap
- Spray Equipment (slide 10)
 - In Florida, they use a "purple pipe" system to put treated wastewater on lawns, etc. The purple simply designates re-use water, non-potable.
- Approval Process (slide 11)
 - AS you move from step 1 (Id needs) to step 5 (Hydro-geological study) the costs go up. It is sensible to front-end load the study, using the desktop analysis to focus the more expensive steps.
- Desktop Evaluation (Slide 12)
 - Used a five mile radius, identifying 200 acre parcels, then discarded those on Elk Neck and the Eastern Shore as being out of reach for Seneca Point.

- Five miles is conservative. In Berlin, MD, the distance between the plant and the spray fields is 8 miles.
- Desktop Evaluation (Slide 13)
 - We used the old digital soils layer. The new data set has not been QA/QC'd
- Desktop Evaluation (Slide 14)
 - We "clipped" the soils in the areas of interest, reduced the acreage by applying a 100 foot buffer around the perimeter, and ran some analyses
 - 200 ft buffer is required if you do nothing. 100 foot is ok if you buffer with trees
 - We estimated annual averages of 5000 gpd/acre for well-drained soils and 3000 gpd/acre for moderately well drained soils. These are both conservative numbers. We did not assign any capacity to the excessively drained soils or poorly drained soils
 - Capacities from this initial assessment varied from a low of 120,000 gpd on a 60 acre site to as much as 2 million gpd on a 530 acre site. (See table)

120	420	560
108	380	450
306	750	1000
325	610	820
61	120	160
89	250	330
120	380	500
530	1500	2000
1659	4410	5820

- Note that this is almost all in the growth area, and that property owners have not been consulted. This was just an exercise to illustrate the process.
- Q&A:
 - Property ownership can vary. Typically a county or municipality owns the land, since their goal is to maximize the capability to take water, whereas farmers are more interested in applying just what is needed for their crops
 - Best crops are hay (orchard grass or reed canary grass)
 - Forests are also very good. Example given of Kendal at Crosslands near Longwood, where the Spray Field is a natural forest that has been in operation since 1976
 - Can harvest timber
 - MALPF allows spray irrigation on MALPF lands on a case by case basis
 - Janice Outen stated MDE has done similar analyses for another county, using 10 acre plots and calibrating the soils for their infiltration rates and slope
 - We did not consider slope here because we know the terrain
 - What size parcel to select is an early decision

Next Steps on Existing Conditions Document

- Waiting for feedback from the towns & DPW
 - Have received Rising Sun & Cecilton comments

- Also asked Joseph DiNunzio, John Higby and Matt Carter for feedback

Goals & Policies

- Two minor upgrades to the Policies were proposed by Dan Derr and agreed to by all present. See blue highlights below.
 - Wastewater Goal 2, Section 4 b
 - Urban / Non-point Source Goal 1 section 2

We also agreed to meet again on September 3rd. Venue TBD

The meeting adjourned at approx 20:30 hrs

Questions for the Subcommittee

- None
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Questions for Staff

- None

Recommendations/Action Items for Staff and Consultants

1. None at present

Recommendations/Action Items for Oversight Committee

Adjournment: ~20:30

Next meeting: September 3rd, 6:30 pm venue TBD

Rough agenda:

- Approval of Minutes
- Review Draft Scenarios prepared by staff group

WATER RESOURCES SUBCOMMITTEE
GOALS & POLICIES
July 2nd 2008

WATER SUPPLY POLICIES

- Goal 1: Sustain and protect existing water supplies
- Goal 2: Develop new water supplies to meet projected demand.

WASTE WATER POLICIES

- Goal 1: Sustain and optimize existing wastewater treatment capacity
- Goal 2: Provide new wastewater treatment capacity to meet projected demand.

URBAN NON POINT SOURCE POLICIES

- Goal 1: Enhance storm water management programs, to reduce non-point source loading of nutrients and sediment into the bay, and to increase infiltration and aquifer recharge
- Goal 2: Manage the impacts of nonpoint source loading in a way that minimizes the impact of development.

Use the County's Water Resources Element, as well as those prepared by Cecil County municipalities as the basis for cooperative County-wide water resources policy and infrastructure implementation.

WATER SUPPLY POLICIES

Goal 1: Sustain and protect water supplies:

Capacity Management:

1. Require the development and use of Water and Wastewater Supply Capacity Management Plans (as defined by MDE) for all community water systems.

Water Resource Protection:

2. Establish and require wellhead protection around all public and community water supply wells.
 - The WRE subcommittee recommends that the County adopt the already-drafted wellhead protection ordinance (to include specific itemization of permitted and prohibited uses).
3. Establish and require watershed protection upstream of all community surface water sources
4. Include water resource protection as a criterion in the Land Preservation, Parks and Recreation Plan (LPPRP) and for individual developments within Forest Conservation Plans.
5. Update and enhance the County's development ordinances to further protect drinking water supplies, through buffering and setback requirements, as well as other appropriate measures.
6. Ensure the availability of water to serve agricultural purposes.

Regional Planning & Management:

7. Work with the Cecil County COG, neighboring jurisdictions, the Susquehanna River Basin Commission and other regional organizations to address water resource issues related to water supply, wastewater treatment, and nonpoint source pollution.

Conservation:

8. Create and implement drought management procedures
9. Design and implement a rigorous water conservation program for all public water supplies.
 - Conduct routine system-wide water audits
 - Implement water accounting and loss control procedures
 - Develop water reuse initiatives.
 - Implement conservation rate structures.
 - Conduct outreach programs to all Cecil County residents, whether on public water supply or individual wells.

New Development:

10. Require new development to pay for the cost of providing the water it needs, either directly, or indirectly using proffers, e.g. impact fees.
11. Growth areas, as designated by the County and its municipalities, should have the highest priority for water and sewer system allocation and expansion.

12. Aggressively pursue development of water resources infrastructure in growth areas in order to reduce development pressure on rural areas.
13. Plan growth in a way that allows sufficient time to develop adequate drinking water and wastewater resources and infrastructure.

Supply Management:

14. Amend the County's land development regulations to require a positive determination that, for all rezoning requests and proposed development (as depicted on site plans/subdivision plats) under consideration, sufficient drinking water exists to serve proposed development without jeopardizing the ability to meet projected water needs within the remainder of the water service area. (See Wastewater policies, Goal 2, policy 4)

Supply Monitoring

15. The County, working cooperatively with the Municipalities, State agencies, and private water suppliers, should routinely monitor water quality and quantity in streams and aquifers to ensure that they remain at safe and sustainable levels.¹

Goal 2: Develop new water supplies:

New Surface Water Supplies:

1. Identify sites for future surface water reservoirs, including those evaluated in the 2006 Surface Water Study.
2. Evaluate increased appropriation from the Susquehanna River, using the 1990 Susquehanna River Withdrawal Study or later study as the basis for this initiative.
3. Investigate opportunities to implement water desalinization for public supply.

New Groundwater Supplies:

4. Evaluate aquifers, such as those identified in the 2006 Groundwater Study, and protect groundwater aquifer recharge areas (outcrops) from pollution through land use regulations (link to Land Use element).

Other Water Sources

5. Draft new or amend existing County development and health regulations to permit and provide specifications for collection of rainwater in cisterns.

¹ Quantity measurements in aquifers would rely heavily on the state's proposed Coastal Plain and Fractured Rock Aquifer studies, as well as measurements of depth to water table and discharges to surface water.

WASTE WATER POLICIES

Goal 1: sustain and optimize existing wastewater treatment capacity

1. Require the development and use of a Waste Water Capacity Management Plan (as defined by MDE) for all community wastewater systems, regardless of available capacity. (Same wording as the Water Supply)
2. Continue to identify and eliminate sources of inflow and infiltration (I/I) to free up additional capacity at treatment plants.
3. Identify opportunities to use innovative and alternative methods of wastewater collection, treatment, and disposal, particularly in areas where nutrient loading is high.
 - a. Develop guidance for and identify areas in the County that are suitable for land application techniques (such as spray irrigation) and tertiary treatment wetlands.
 - b. Develop a Sludge Management Plan that addresses, in part, land application of sludge from County and municipal wastewater treatment plants.
4. Develop a Denied Access policy to govern water and sewer system extensions into rural areas in order to address health concerns.
5. Continue to actively pursue the abatement of failing septic systems—particularly those identified in the County Water and Sewer Master Plan—through connection to public systems.
6. Develop or expand community wastewater treatment systems in areas with widespread septic system problems that are a health concern, cannot be addressed by on-site maintenance and management programs, and are too far from public sewer systems to be connected.
 - a. Amend the County Zoning Ordinance as necessary to eliminate any provisions allowing additional density for such retrofits.

Goal 2: Provide new wastewater treatment capacity to meet projected demand.

1. Continue to ensure that existing and planned public wastewater collection and treatment systems meet projected demand without exceeding nutrient caps, TMDLs, and other water quality limitations.
2. Utilize MDE's Nutrient Cap Management and Trading policy for point sources, and forthcoming regulations for nonpoint source trading, and identify nutrient reduction strategies that could provide credits to WWTPs.
 - a. Retire existing minor WWTPs (such as Cherry Hill) and connect their flows to an ENR facility.

- b. Over the long term, upgrade all remaining WWTPs to ENR or better, through a combination of conventional and tertiary treatment.
- 3. Intend to combine with water supply policy Goal 1, Policy 14. Amend the County's land development regulations to require a positive determination that, for all rezoning requests and proposed development (as depicted on site plans/subdivision plats) under consideration:
 - a. sufficient wastewater discharge capacity exists or will exist to serve projected development, without jeopardizing the ability to meet projected wastewater needs within the remainder of the water service area.
 - b. Total Maximum Daily Load (TMDL) or other measures of water quality threats from non-point source nutrient loads will not be exceeded [Move to NPS].
- 4. In order to expand Countywide wastewater system capacity to accommodate projected growth, while complying with nutrient discharge limitations, the County should give high priority to the following improvements:
 - a. Expand the North East (Seneca Point) WWTP to 5 MGD by 2030². This will likely require the County to earn or purchase nutrient credits (through the provisions of MDE's Nutrient Trading Policy).
 - b. Work with ~~the Town of Elkton~~ other public and private entities to construct a new Elkton West WWTP. Retire the Cherry Hill WWTP and pursue other options to earn or purchase the offsets necessary to allow construction of this new facility.
 - c. Expand the Meadowview WWTP. Meadowview discharges into the Christina River, which flows into the Delaware Bay and is governed by a less stringent TMDL than those required under the Chesapeake Bay nutrient caps.

² More precise years and volumes will be based on projections and scenarios, which we don't have now. Full expansion by the Comp Plan Horizon is a good start (per BWS).

URBAN NON POINT SOURCE POLICIES

Goal 1: Enhance storm water management programs, to reduce non-point source loading of nutrients and sediment into the bay, and to increase infiltration and aquifer recharge

1. Monitor the amount of impervious surface at the 8 digit watershed level and take measures to protect water quality, especially in watersheds that approach critical thresholds.³
2. Amend the County's development ordinances as necessary to implement the 2007 Maryland Stormwater Management Act to the maximum extent feasible, including removing obstacles to Environmental Site Design (ESD) techniques including engineering design that utilizes the soil's infiltration capacity under impervious surfaces.⁴
3. Adopt and amend forest policies as necessary to protect and improve water quality, as referred to in the Cecil County Green Infrastructure Plan and the Forest Conservation Act.
 - a. Expand stream and wetland buffers
 - b. Conserve existing forest during and after development
 - c. Develop afforestation and reforestation policies
4. Allocate funds from Maryland's Program Open Space to acquire land important for maintaining water quality.

Goal 2: Manage the impacts of nonpoint source loading in a way that minimizes the impact of development.

1. Update the non-point source loading analyses (including point source data) annually, and refine this analysis in coordination with MDE.⁵
2. The County should develop and administer a system to track and report on changes in the County's Green Infrastructure network, water quality, and habitat conditions. The system should include an inventory of priority restoration and reforestation opportunities, track nutrient management progress, and facilitate application of the County's Tributary Strategy goals.

³ Water quality begins to become impaired when impervious coverage in a watershed approaches seven to ten percent.

⁴ ESD utilizes natural features and low cost "non-structural" engineering controls (rain gardens, green roofs) to ensure that post-development drainage characteristics are as similar as possible to pre-development conditions

⁵ The current analyses provide a preliminary assessment of potential changes in non point source loads due to land use planning decisions. It is anticipated that these analyses will be refined over time.

3. Require all new development outside of existing public sewer service areas in the Chesapeake Bay Critical Area and wellhead protection areas, or within 300 feet of streams to use septic denitrification systems. Elsewhere, require nutrient offsets for subdivisions built using individual septic tanks.⁶
4. The County should review and revise as necessary the current Forest Conservation ordinance to target forest conservation areas in stream and wetlands buffers.
5. Create a County-level Forest Conservation program that would allow participation by of parcels that are not large enough to qualify for a state Forestry Stewardship Plan, where the parcel adjoins an area that is already in Forestry Stewardship, or is in a designated Green/Blue Infrastructure high priority area.
6. The County Planning Department should identify and designate Restoration Focus Watersheds (using 12-digit watersheds) where water quality enhancement would be encouraged through reforestation, wetland restoration, zoning, and other development ordinances. The goal would be to maintain or achieve at least 40% forest and wetland cover within these watersheds, including preservation of existing forest and wetland resources, as prescribed by the Cecil County Green Infrastructure Plan.
7. Promote re-use of storm water and treated wastewater for purposes such as on-site irrigation (storm water), non-potable process water (industrial activities), and other uses, where appropriate.

The WRE sub-committee recognizes the need for more effective strategies to channel development away from agricultural and forest land and towards designated growth areas. To that end, the WRE sub-committee urges that:

- a. the Land Use, Agriculture, and Infrastructure subcommittees should review and improve the current TDR program.
- b. the Infrastructure subcommittee should re-examine and propose options to accelerate the completion of water and sewer infrastructure in the designated growth areas, thereby creating a receiving area for Transfer of Development Rights and providing an incentive for growth to avoid rural areas.
- c. the Agriculture subcommittee should review our MALPF & Rural Legacy programs and ensure that the County maintains its active status
- d. the Land Use and Agriculture subcommittees should review the "Preserved Ag Land and Natural Resource Land District" proposed by Dan Derr.

⁶ Zoning code already specifies a minimum of 110' from streams and wetlands, so this is the starting point.