

Southern Kent Island Sanitary Project



Public Hearing Series
May 1, 2014

Tonight's Hearings

1. Southern Kent Island Sewer Project
2. Lot Consolidation Ordinance 13-24
3. Resolution 14-07 South Kent Island
Wastewater Subdistrict

Hearing #1

Southern Kent Island Sanitary Project

A proposal to construct a public sewer collection and transmission system to serve the area known as South Kent Island

A hearing and favorable vote on the project are required by recently enacted HB 11 as a condition to access State Bay Restoration Funds needed for the project

Hearing #2

Lot Consolidation Ordinance

13-24

An Act Concerning the Use and Merger of
Certain Substandard Lots in the Neighborhood
Conservation (NC) District

Hearing #3

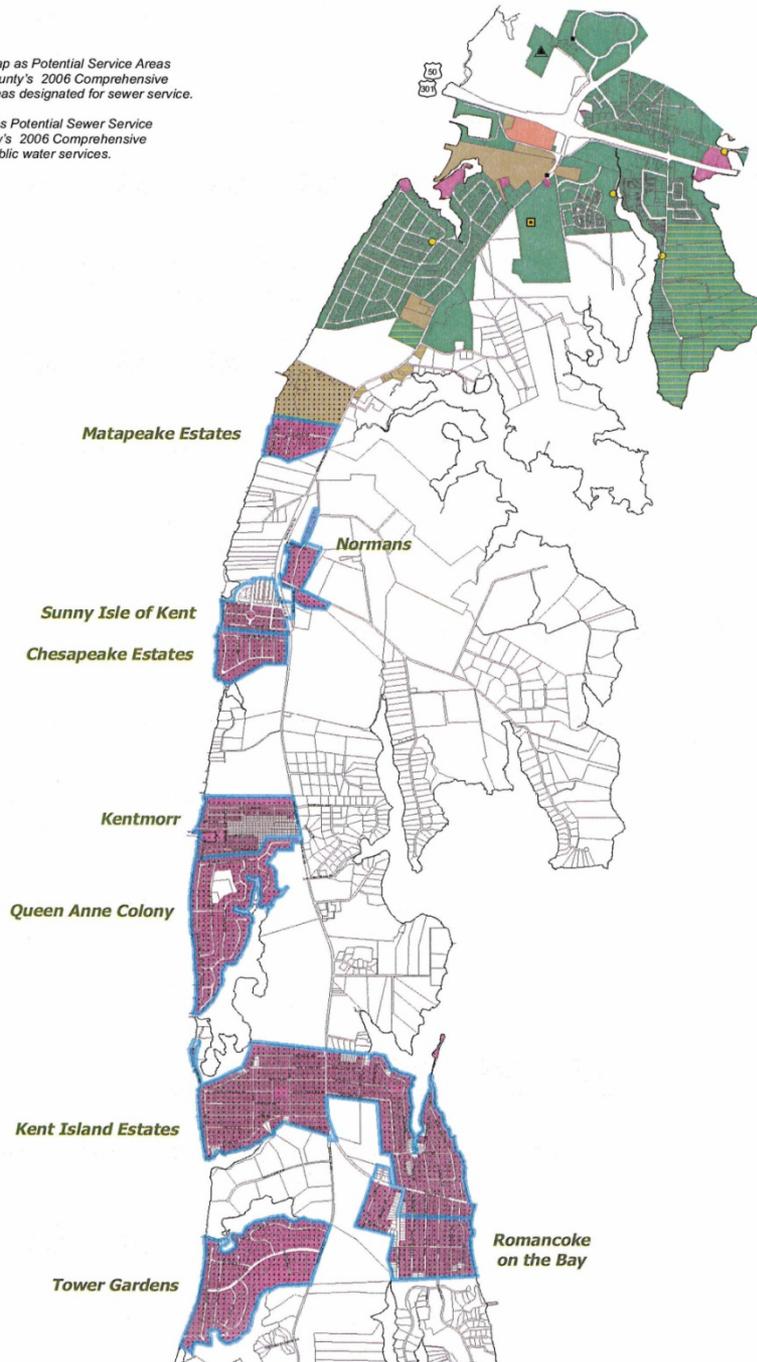
Resolution 14-07

To establish the South Kent Island Wastewater Subdistrict and method to levy Special Benefit Assessments

Project Service Area

**Note: Areas identified on this map as Potential Service Areas include areas identified in the County's 2006 Comprehensive Water and Sewerage Plan as areas designated for sewer service.*

No areas identified on this map as Potential Sewer Service Areas are identified in the County's 2006 Comprehensive Water and Sewerage Plan for public water services.



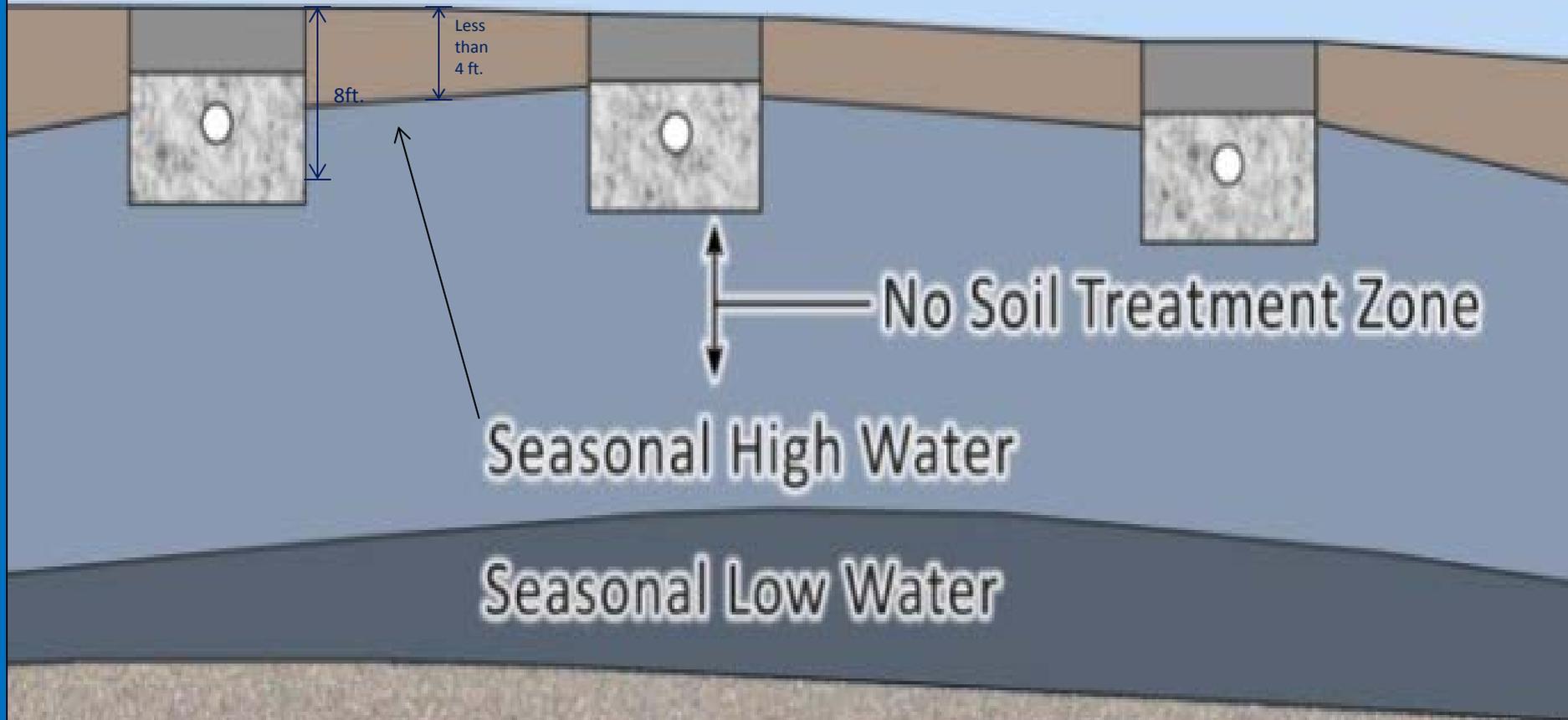
Project Goals

- End Public Health Risk
- Reduce Nitrogen loads going into the Chesapeake & Eastern Bays
- Provide an affordable permanent wastewater disposal solution
- Reduce Development Potential

Longstanding Documented Health & Environmental Risks

- 1990 Health Department Sanitary Survey “70% to 90% septics directly discharge into groundwater”
- 1995 Health Department Sanitary Survey “ confirmed 80% septics directly discharge into groundwater”
- 1998 and 2004 Health Department affirmed septic failures on SKI
- 2007 Health Officer concludes “clear evidence” of continuing septic system failures” and “permanent solution is warranted”
- 2011 Health Department documents that “public sewer is proper permanent solution to SKI sewage disposal issue”
 - Seasonal high groundwater levels invade septics
 - Lack of dry soil treatment zone
 - Small lot sizes and poor surface drainage
 - Over 1,200 septic systems failing by State Standards

Groundwater Penetration



Longstanding Documented Health & Environmental Risks

- Dr. Robert Rubin, Environmental Scientist & Professor Emeritus
 - Served the Biological and Agricultural Department of North Carolina State University from 1978 to 2004
 - Served as a visiting scientist with the US EPA in Washington, DC where he assisted with development of wastewater management guidelines
 - Provided national leadership in the critically important areas of rural water quality and wastewater management

Longstanding Documented Health & Environmental Risks

➤ Dr. Rubin concluded:

- “Over 2,000 onsite permits indicate trench depths over 8 feet”
- “Permits indicate soil saturation at depths less than 4 feet”
- “Domestic wastewater is placed directly into groundwater which flows into the Bay”
- “Unless corrected the input of nitrogen and other constituents will continue to flow into the bay”
- “Use of the public utility appears most cost effective, use of the County ENR managed facility offers greatest potential for improving treatment levels in the future”

Project Goals

Watershed Implementation Plan (WIP) Benefits Removal of existing septic systems through connection to County ENR Plant

- 17,300 lb reduction of nitrogen (including new 560 lot infill) *
- 20% of total County Government Nitrogen Reduction Goal
- 33% of County Septic System Nitrogen Reduction Goal
- To meet County Septic System WIP goal without this project
 - Over 90% of septic systems Countywide would need to be converted to BAT Septic Systems
 - Cost of \$120 million

* AS calculated by MDE

Alternative Systems Not Viable

- MDE notes that alternative systems not effective where effluent is disposed into groundwater, which is unavoidable in project area.
- 2007 report from Public Works Advisory Board Options Group studied 10 alternative systems approved for use in MD for onsite waste disposal
- Conclusions – due to high water table, small lot sizes and less than the state-of-the-art treatment .
“Onsite systems should not be further examined”

Alternative Systems Not Viable

- Dr. Rubin also concluded
 - Alternative systems are available
 - They are expensive to construct and operate
 - They require comprehensive maintenance to remain in proper working condition for life of property
 - Systems cannot overcome hydraulic limitations (poor soils and high groundwater)

Alternative Systems Not Viable

Busse System

- New onsite system approved in some states
- Systems installed in basement of homes (not typical situation in project area)
- Less than 1,000 of these systems in operation worldwide
- System standards requires 12-inches from bottom of drain field to high water table (not situation in project area)

Alternative Systems Not Viable

Busse System

- Not currently approved in Maryland
- State of Maine has approved Busse system for new development on previously unbuildable lots
 - Eight systems in operation
 - Could undermine growth management efforts if approved by Maryland
- Cost is \$22,000 to install plus \$500 annual Operations and Maintenance
 - Public system is more economical to homeowners at \$14,417 per existing home plus \$360 annual Operations & Maintenance
 - Public system provides permanent wastewater disposal solution

Project Goals



Avoid Holding Tanks Average House

\$200 - \$240 per Pump Out

\$7,200 - \$8,640 per Year

Project Affordability

HB11 created new legislation to allow use of Bay Restoration Fund Grants for the project

- Limited to improved properties only
- Will cover homeowner wastewater treatment (allocation) fees
- Target monthly charge to present homeowners to no more than \$100 per month

Project Affordability

- State Revolving loans will supplement BRF Grant to fund the entire project
- No tax burden to citizens for project funding
- Preliminary construction cost estimates are conservative
- Without project County will have to implement other initiatives to meet WIP goals
 - Likely imposing new cost on taxpayers

Reducing Development Potential

- Provide service to developed areas only within communities
- Avoid large blocks of undeveloped lots
- Require lot consolidations to further reduce infill growth (Ordinance 13-24)
- Legislatively restrict infill from 1,600 to no more than 658 lots
- State will limit development to 658 lots as a condition for receiving State funding
- History indicates no more than 560 lots will be developed

Growth Impact Mitigation

- Potential lot development reduced about two-thirds
- Phasing of development resulting from project construction now planned for over 8 years and still recovering housing market assure time to both assess and address infrastructure needs arising from new lot development
- State Department of Planning projects accelerating trend in County toward a more senior population

Growth Impact Mitigation

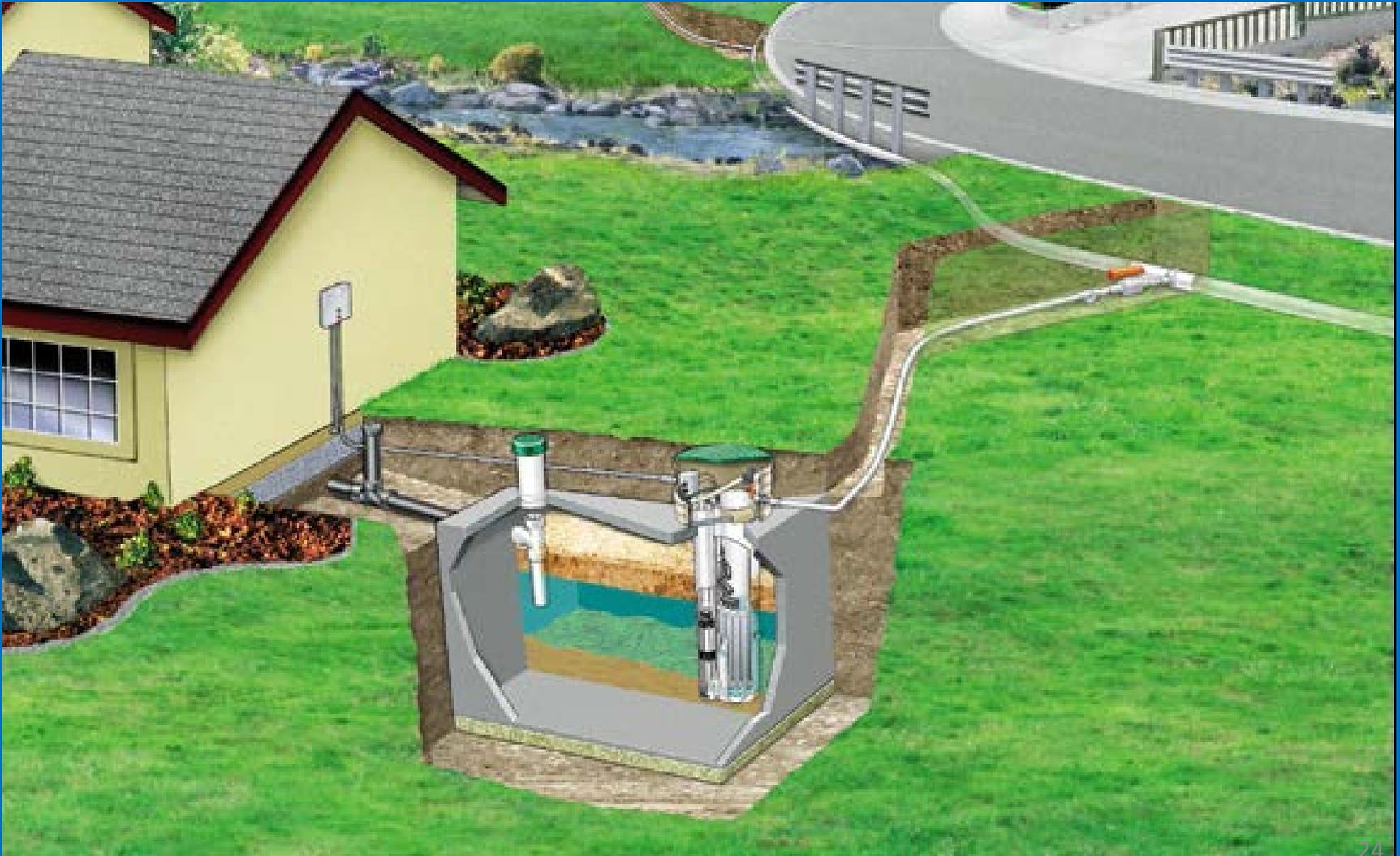
- Demographics of new development will be assessed as to its impacts on infrastructure needs, e.g. more seniors have much lower impact on public schools and road needs, but greater impact on EMT needs
- Already acquired extensive right-of-way for widening of Route 8 and traffic flow improvements at US 50/Rte 8 can address traffic burdens
- Sufficient capacity in schools now to accommodate the development, but development impacts from other areas must be considered and capacity will be monitored as infill occurs

Growth Impact Mitigation

- Additional fire suppression and EMT equipment may be needed at United Communities Volunteer Fire Department with existing physical plant likely sufficient and impact fee dollars will be available
- Public recreation opportunities in area sufficient
- Expansion of commercial uses on two available locations - Kentmorr and Silver Swan, greatly restricted due to Critical Area and County zoning laws applicable upon redevelopment due to loss of grandfathering.
- New revenues from property and income taxes and impact fees provide a viable and substantial resource for infrastructure improvements.

Project System

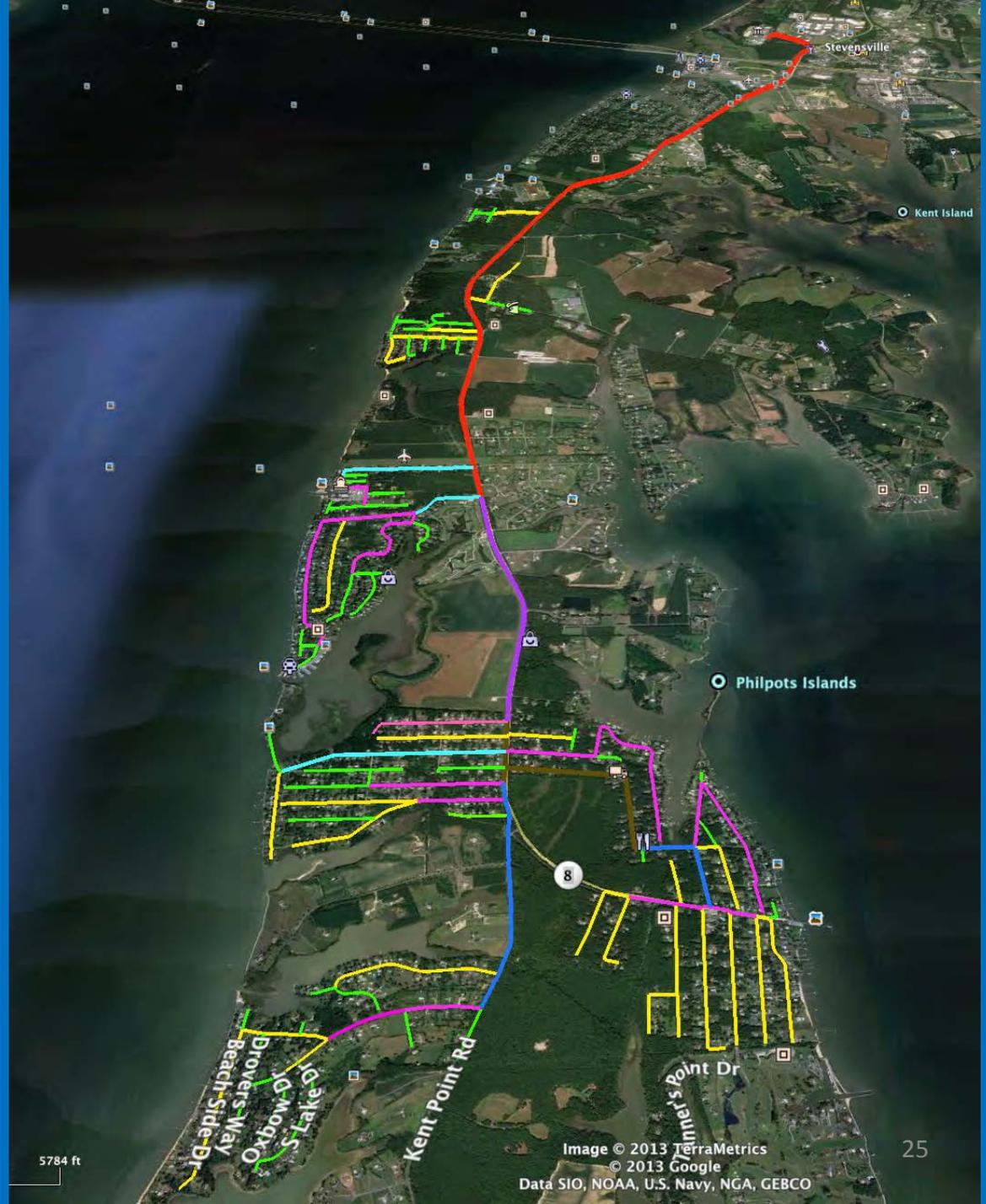
Sepic Tank Effluent Pumping



Project System

Overall View of the Project

- Red** — 16" Dia.
- Purple** — 12" Dia.
- Brown** — 10" Dia.
- Dark Blue** — 8" Dia.
- Light Blue** — 6" Dia.
- Pink** — 4" Dia.
- Yellow** — 3" Dia.
- Green** — 2" Dia.



No New Tax Burdens

- No County general fund or general obligation bond funding needed for project
- Project will be self-sustaining with user charges and State Bay Restoration Fund grants, paying costs, including debt service
- Project cost projections conservative with adequate reserves
STEP system reduced project costs by over \$10 million
- Over twenty year experience with Bay City and Cloverfields documents project will be self-sustaining

Ordinance 13-24

Reducing Development Potential

- Implement the existing Neighborhood Conservation (NC) zoning in place since 1987
- Reduce the number of substandard lots that can be developed
- Manage development arising from sewer extension by requiring the merger of lots in common ownership to meet current zoning requirements to extent possible

Ordinance 13-24

Reducing Development Potential

- Requires merger of lots in common ownership to meet current zoning requirements to the extent possible
- Applies to both vacant lots and improved properties
- May not leave nonconforming lots adjacent to lots in same ownership
- Requirement for disclosure of lots subject to merger
- Structured tightly by retained counsel to withstand possible lawsuits

Resolution 14-07

- Establish criteria and formula to equitably levy special benefit assessments to pay project debt service on all properties
- Monthly payments do not begin until service is made available
- Keep homeowner charge under \$100 per month
 - \$70/month, 20 year debt service
 - \$30/month, Operations & Maintenance

Resolution 14-07

- Includes an Economic Benefit Premium charge assignable to vacant lots
- Allow for delayed payments for the allocation fee and STEP system equipment for vacant lots until the building permit stage
- Allow up to a five year deferral on the principal balance of the Economic Benefit Premium for vacant lots

Resolution 14-07

Estimated Project Funding Parameters

| | |
|--|--------------|
| Existing homes served & | 1518 |
| Existing non residential properties served | 8 |
| Vacant lots served | 560 * |
| Buildable vacant lots served | 12 |
| Estimated Total Construction Cost Of Infrastructure | \$37,433,326 |
| Economic Benefit Premium (vacant lots only) | \$25,600 ** |
| Estimated Average STEP System Cost | \$12,500 |
| Allocation (Treatment) Fee | \$ 7,750 |

*Based on County legislative actions & historical lot consolidation trends

** Final value to be set by the Commissioners

Resolution 14-07

Resulting Homeowner Charges

| | | |
|---|---|-------------|
| Base Cost * | = | \$ 1,917 |
| STEP Cost | = | \$12,500 |
| Allocation Fee (Bay Restoration Fund Grant) | = | <u>\$ 0</u> |
| Total cost if paid up front | = | \$14,417 |
| | | |
| Monthly Debt Service (20 year payoff) | = | \$70 |
| Operations & Maintenance per month | = | <u>\$30</u> |
| Total Monthly Payment | = | \$100 |

* Base cost calculated by Formula in Resolution 14-07

Resolution 14-07

Resulting Vacant Lot Owner Charges Prior to Building Permit

| | | |
|--|---|-----------------|
| Base Cost * | = | \$ 1,917 |
| Economic Benefit Premium | = | <u>\$25,600</u> |
| Total cost if paid up front | = | \$27,517 |
| Monthly Debt Service (20 year payoff) | = | \$ 134 |
| Operation & Maintenance (ready to serve) | = | <u>\$ 10</u> |
| Total Monthly Payment before building permit issuance | = | \$ 144 |

OR

| | | |
|--|---|--------------|
| Monthly Debt Service (if deferred for 5-years) | = | \$ 42 |
| Operation & Maintenance (ready to serve) | = | <u>\$ 10</u> |
| Total Monthly Payment before building permit issuance | = | \$ 52 |

* Base cost calculated by Formula in Resolution 14-07

Resolution 14-07

Resulting Vacant Lot Owner Charges Upon Building Permit Issuance

| | | |
|-----------------------------------|---|--------------|
| Monthly Debt Service | = | \$ 134 |
| Operation & Maintenance per month | = | <u>\$ 30</u> |
| Monthly Payment | = | \$ 164 |

Additional Fees & Costs

| | | |
|---|---|----------|
| Allocation Fee (payable at time of permit issuance) | = | \$ 7,750 |
| STEP System (included in the home's cost) | = | \$12,500 |

Financial Assistance

- Department of Community Services will facilitate programs to qualified owner occupied homes/residents
- Opportunities may include
 - Rural Development 504
 - Community Development Block Grants
 - County Revolving Loan Funds
- Funds target low/moderate income owner-occupied homes

Financial Assistance

- Funds historically available via no cost/no interest loans
- Repayment only required when property is transferred/sold
- Some cases homeowners may qualify for GRANT Funds

Financial Assistance

- Funds will be applied for as project is implemented
- County has had successful experience working with these funds on prior completed projects in:
 - Cloverfields 1994
 - Bay City 1995

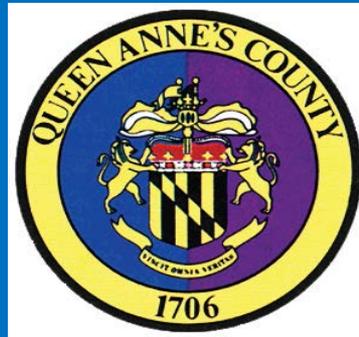
Design/Construction Schedule

| | |
|---|-------------|
| Phase 1: Trunk Line & Tower Gardens | 2015 – 2017 |
| Phase 2: Kent Island Estates & Romancoke | 2016 – 2020 |
| Phase 3: Queen Anne Colony & Kentmorr | 2019 – 2022 |
| Phase 4: Chesapeake Estates, Sunny Isle of Kent Batts Neck & Matapeake Estates | 2021 - 2023 |

Next Steps

- Receive Public Comments
- Consider the Project, Ordinance 13-24 and Resolution 14-07 as a package
- Review Project with State Smart Growth Committee
- Develop Funding Agreement with State for Bay Restoration Fund Grant & State Loans

Southern Kent Island Sanitary Project



Public Hearing Series
May 1, 2014

Comments on Hearing #1

Southern Kent Island Sanitary Project

Permanently End Public Health Risk

Greatly Reduce Nitrogen Pollution into Bay

Avoid Holding Tank Costs \$200/month or more

Needed to meet County WIP Goals

Comments on Hearing #2

Lot Consolidation Ordinance 13-24

Manage infill lots to no more than 658 new homes
likely not to exceed 560

Only means County has to legally reduce number
of buildable lots

Without vacant lot reduction, State will not
support project with funding

Comments on Hearing #3

Resolution 14-07

Committed to no more than a \$100/month charge for existing homeowners

Establish equitable and affordable assessments

Allows 20-year financing program

Allows deferrals for vacant lots reducing pressure to sell or develop