Howard County’s Program for Shared Sewage Disposal Facilities

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Department of Public Works
Howard County, Maryland
Metropolitan Service Area
Cluster Development

- Open space
- Forest conservation
- Agricultural preservation
- Promoted by Planning and Zoning
- What if the lots don’t perc?
SSDF Acceptance Process

- Boundary plat
- Test pits, percolation testing
- Approval of percolation plat
- Acceptance into Water & Sewer Master Plan
Design Review

- Department of Planning and Zoning
  - Development Engineering Division
- Howard County Health Department
  - Environmental Health Division
- Department of Public Works
  - Bureau of Utilities
Legal Documentation

- Developer’s Agreement
  - Perpetual incorporated homeowners association
- Declaration of Covenants
- Deed of Easement
## Howard County’s SSDF’s as of October ‘06

<table>
<thead>
<tr>
<th>SUBDIVISION NAME</th>
<th>MDE GROUNDWATER PERMIT</th>
<th>CONVENTIONAL or PRESSURE DOSE</th>
<th>PRE TREATMENT</th>
<th>NUMBER OF CONNECTED LOTS</th>
<th>Maximum Daily Flow</th>
<th>Average Daily Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashleigh Knolls</td>
<td>Yes - No effluent limits</td>
<td>pressure</td>
<td>Future</td>
<td>109</td>
<td>32,700</td>
<td>16,350</td>
</tr>
<tr>
<td>Brantwood</td>
<td>No</td>
<td>conventional</td>
<td>No</td>
<td>7</td>
<td>4,200</td>
<td>2,100</td>
</tr>
<tr>
<td>Friendship Lakes</td>
<td>No</td>
<td>conventional</td>
<td>No</td>
<td>5</td>
<td>3,750</td>
<td>1,875</td>
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<tr>
<td>Lyndonbrook</td>
<td>No</td>
<td>conventional</td>
<td>No</td>
<td>11</td>
<td>6,600</td>
<td>3,300</td>
</tr>
<tr>
<td>Riggs Meadow</td>
<td>No</td>
<td>conventional</td>
<td>No</td>
<td>4</td>
<td>2,400</td>
<td>1,200</td>
</tr>
<tr>
<td>Maple Ridge</td>
<td>No</td>
<td>conventional</td>
<td>No</td>
<td>7</td>
<td>4,200</td>
<td>2,100</td>
</tr>
<tr>
<td>Pindell Woods</td>
<td>No</td>
<td>conventional</td>
<td>No</td>
<td>2</td>
<td>1,200</td>
<td>600</td>
</tr>
<tr>
<td>Tridelphia Crossing</td>
<td>No</td>
<td>conventional</td>
<td>No</td>
<td>8</td>
<td>4,800</td>
<td>2,400</td>
</tr>
<tr>
<td>Paddocks East</td>
<td>No</td>
<td>conventional</td>
<td>YES</td>
<td>8</td>
<td>4,800</td>
<td>2,400</td>
</tr>
</tbody>
</table>
Chesapeake Bay Restoration
State Regulations

- SSDF’s with flow >10,000 gallons per day require nutrient reduction
- Discharge limits:
  - 30 mg/L BOD
  - 30 mg/L TSS
  - 10 mg/L Total Nitrogen
New County Policy

• Revisions
  – Howard County Code
  – Developers’ Agreements
  – Declaration of Covenants
  – Rights of Entry
  – Deeds of easements
  – Fee simple deeds
Howard County Code
Definition of SSDF

- Serves more than one residential lot
- Located on public right-of-way, BOE property or preservation parcel
- Subject to easements and covenants
- Consists of
  - Mainline collection sewers and appurtenances
  - Subsurface disposal area
  - Cables, wires control panels, etc.
  - And any related equipment, chemicals & materials
Howard County Code

- Only non-permitted SSDF’s accepted into Water & Sewer Master Plan
- Grandfathering of eight permitted SSDF’s
Howard County Code + Developer’s Agreement

- Drain Field Requirements
  - Non-buildable (CoMar)
  - Owned in perpetuity by HOA
  - Subject to easements and covenants
Howard County Code + Developer’s Agreement

- Lowering Risk
  - Sureties
  - Drainfield installation
  - On-site treatment operation
Sureties: County Code and Developer’s Agreement

• Performance Surety
  – 100% of estimated construction cost
  – Guarantees time and satisfactory completion
  – Guarantees operation of facility in accordance with developer’s agreement
  – Released at County acceptance of facility
Sureties: County Code and Developer’s Agreement

• Payment Surety
  – 50% of estimated construction cost
  – Guarantees payment of debts owed for labor and materials used in construction of the facility
  – Released at County acceptance of facility
Sureties: County Code and Developer’s Agreement

- Maintenance and Repair Surety
  - 50% of estimated construction cost
  - Guarantees repairs and remedy of damages
  - Retained for one year after County assumes ownership
Lowering Risk: Developer’s Agreement

- Drainfield
  - 300% of drainfield capacity must be available (CoMar)
  - Developer installs 2 of the 3 required drainfield
  - Piping is run to and stubbed at third drainfield
Lowering Risk: Developer’s Agreement

• Acceptance of facility by the County
  – Permitted systems:
    The facility must operate for one year past 80% occupancy with NO PERMIT VIOLATIONS
  – Non-Permitted systems:
    The facility must operate for one year past 80% occupancy with developer addressing any mechanical or structural problems
Howard County Code + Code of Covenants

- Easement clarification
- Equipment ownership
  Includes grinder pumps and control panels
- Enforcement / authority
Howard County Code +
Code of Covenants

- Responsibilities of property owners
  “Do Not Flush List”
- Charges for damages
- Late payment penalties
Design Manual – Volume IV

- Grinder pumps
- Control panels
- Scada system
- [http://www.co.ho.md.us/DPW/DOC S/volumeIVpart1of3gencond.pdf](http://www.co.ho.md.us/DPW/DOC S/volumeIVpart1of3gencond.pdf)
Design Manual – Volume II

- Design Manual
- Primary standard for treatment units = identical unit must have been operating and meeting permit in the State of Maryland for a minimum of one year.
## Proposed permitted SSDF’s

<table>
<thead>
<tr>
<th>SUBDIVISION NAME</th>
<th>MDE GROUNDWATER PERMIT</th>
<th>CONVENTIONAL or PRESSURE DOSE</th>
<th>PRE TREATMENT</th>
<th>NUMBER OF CONNECTED LOTS</th>
<th>Maximum Daily flow</th>
<th>Average daily Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chelsea Knolls</td>
<td>YES</td>
<td>Pressure</td>
<td>Yes</td>
<td>18</td>
<td>10,800</td>
<td>5,400</td>
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<tr>
<td>Musgrove Property</td>
<td>YES</td>
<td>Pressure</td>
<td>Yes</td>
<td>31</td>
<td>18,600</td>
<td>9,300</td>
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<td>Peddicord: Shepard Manor</td>
<td>YES</td>
<td>pressure</td>
<td>Yes</td>
<td>11</td>
<td>9,000</td>
<td>4,500</td>
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<tr>
<td>Pickett Property (The Legacy)</td>
<td>YES</td>
<td>Pressure</td>
<td>Yes</td>
<td>21</td>
<td>12,600</td>
<td>6,300</td>
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<tr>
<td>Riverwood</td>
<td>YES</td>
<td>Pressure</td>
<td>Yes</td>
<td>18</td>
<td>11,000</td>
<td>5,500</td>
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<tr>
<td>Walnut Creek (Bassler Property)</td>
<td>YES</td>
<td>pressure</td>
<td>Yes</td>
<td>149</td>
<td>127,500</td>
<td>63,750</td>
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<tr>
<td>Walnut Grove</td>
<td>YES</td>
<td>pressure</td>
<td>Yes</td>
<td>87</td>
<td>65,250</td>
<td>32,625</td>
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<td>Willow Pond</td>
<td>YES</td>
<td>Pressure</td>
<td>Yes</td>
<td>16</td>
<td>12,000</td>
<td>6,000</td>
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<td>SUBDIVISION NAME</td>
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<tr>
<td>Edgewood Farms</td>
<td>No</td>
<td>conventional</td>
<td>no</td>
<td>8</td>
<td>4,800</td>
<td>2,400</td>
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<tr>
<td>Fulton Woods</td>
<td>No</td>
<td>Pressure</td>
<td>No</td>
<td>8</td>
<td>4,800</td>
<td>2,400</td>
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<tr>
<td>Henry Property (Maplewood Farms)</td>
<td>No</td>
<td>Conventional</td>
<td>No</td>
<td>6</td>
<td>4,200</td>
<td>2,100</td>
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<tr>
<td>Hopkins choice</td>
<td>No</td>
<td>pressure</td>
<td>No</td>
<td>15 (2 separate areas)</td>
<td>11,250</td>
<td>5,625</td>
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<tr>
<td>Kogan Trust Property</td>
<td>No</td>
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<td>no</td>
<td>3</td>
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<td>Marty Howard Property</td>
<td>No</td>
<td>conventional</td>
<td>yes (private units)</td>
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<td>unknown</td>
<td>unknown</td>
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<td>Neshawat Property</td>
<td>No</td>
<td>Pressure</td>
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<td>7</td>
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<td>2,375</td>
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<td>Owings Property Lot 3</td>
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<tr>
<td>Owings Property Lot 5</td>
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<td>No</td>
<td>7</td>
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<tr>
<td>Paddocks East</td>
<td>No</td>
<td>conventional</td>
<td>yes (demonstration)</td>
<td>8</td>
<td>4,800</td>
<td>2,400</td>
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<tr>
<td>Willow Ridge</td>
<td>No</td>
<td>Conventional</td>
<td>no</td>
<td>5</td>
<td>7,500</td>
<td>3,750</td>
</tr>
</tbody>
</table>
Summary of program success

- Cooperation and input with various departments in the County for design & specifications
- The Office of Law and the County Council
- Ongoing communication with the Maryland Department of the Environment.
- Open communication between the County, homeowners’ associations & the public
- The annual fees paid by the homeowners’ must be accounted for and justified.
Further information

- The Utility Management Conference 2008
  Water Environment Federation
  American Water Works Association
- Howard County Code
  http://library2.municode.com/default/home.htm?infobase=10016&doc_action=cleardoc
- Volume IV Design Manual
- Beccy Kugel: bkugel@howardcountymd.gov or 410.313.2723
References


