

TALBOT COUNTY REGION II – SANITARY DISTRICT (ST. MICHAELS)
SEWERAGE SYSTEM

The following Resolutions expanded the Region II – St. Michaels Sewer Service Area:

1. **Resolution 121** – Extended the Region II Wastewater System on a temporary basis to the Martingham Community
2. **Resolution 143** – Extended sewer to Tax Map 24, Parcel 75
3. **Resolution 210** – Extended sewer to the Martingham Community on a permanent basis
4. **Resolution 235** – Extension of sewer to communities along MD 33 south of St. Michaels like Arcadia Shores, Aveley Farm, Doncaster and Blueberry Acres and along MD 33 north of St. Michaels like Rolles Range Road, Yacht Club Road and Deep Water Point Road
5. **Resolution 236** – Extended sewer to Tax Map 32, Parcel 36 (Shannahan Well Company)
6. **Resolution 250** – Will extend sewer to small lots along the route to the villages of Bozman and Neavitt
7. **Resolution 282**, as amended – Will extends sewer to Tax Map 23, Parcel 41, 24500 Rolles Range Road
8. **Resolution 305** – Will extend sewer to Tax Map 32, Parcel 164, Lot 1 (25154 St. Michaels Road)
9. **Resolution 306** – Extended sewer to Tax Map 32, Parcels 75 and 148 (1006 and 1004 S. Talbot Street, St. Michaels)
10. **Resolution 309** – Will extend sewer to Tax Map 32, Parcel 85 when sewer is extended to the villages of Bozman and Neavitt

The following Resolutions added the following capital improvement projects:

1. **Resolution 219** – to add a new screw press for the material handling facility for sludge drying (this was replaced with a new Belt Filter Press)
2. **Resolution 272** – adding to the sewer collection system rehabilitation and replacement capital improvement project that also included a new Belt Filter Press for \$550,000.00
3. **Resolution 319** – Part of wastewater treatment plant consolidation program to extend sewer to the Region V Wastewater Treatment Plan to provide ENR treatment and to extend sewer to small lots in and outside of villages between St. Michael and the village of Tilghman

The following Resolutions added debt service for the Region II Wastewater Treatment Plant and the St. Michaels Pump Stations:

1. **Resolution 129** – established a fund for permanent public improvements to the Region I and II Sewer Systems related to the indebtedness.
2. **Resolution 132** – For the Talbot County Water Quality Bond in the amount of \$2.5 million for the planning, engineering and expenses for improvement to the wastewater facility.

The following Resolution added or amended policies:

1. **Resolution 148** – Sewer allocation policy for new lots

Refer to Figure No. 27, Talbot County Region II – Sewerage System Plan, for the limits of this Sanitary District. The boundaries of Sanitary District No. 2 include the Town of St. Michaels, Rio Vista and Bentley Hey, and extends to and includes Newcomb, Cedar Grove, Royal Oak, Royal Acres and Bellevue to the Southeast.

The Wastewater Treatment Facility for Region II is owned by Talbot County. The plant is located on a 30-acre parcel of land. The treatment facility includes primary, secondary and tertiary treatment. Prior to discharge, the effluent is disinfected with ultra-violet lamps and post aerated. The sludge is aerobically digested and dried using a belt filter press and ultimately disposed at the Midshore Regional Landfill. The design capacity of the plant is 660,000 gpd with the wastewater treatment system designed to handle two 10-year storms, back to back.

The Talbot County Sanitary District is reviewing a strategy of consolidating all the wastewater treatment plant operations at the Region II Wastewater Treatment Plant with wastewater flows from the Region V (Tilghman) Wastewater System being conveyed to this facility. In addition to treating the wastewater flows from the Region V (Tilghman) Wastewater system, the Talbot County Sanitary District is reviewing a septic system elimination strategy that would extend sewer to the villages of Claiborne, McDaniel, Wittman and Sherwood along with extending sewer to small lots along Maryland Route 33 between the Region V (Tilghman) Wastewater System and the Region II (St. Michaels) Wastewater System. To accommodate the increased flows, the Region II (St. Michaels) WWTP would need to be increased to 990,000 gpd.

Point of Discharge – Miles River

Collection System – 8” – 12” diameter (Clay and PVC): 6 miles of gravity sewer

Pumping Stations:

No. 1 (Green Street) – 1 – bypass bar screen manually cleaned – two 500 gpm-FlowServe dry pit submersible pumps with 6” diameter discharge. Emergency power.

No. 2 (Mill Street) – two 500 gpm-FlowServe dry pit submersible pumps with 4” diameter discharge. Station has a manually cleaned bar screen and emergency generator for backup power.

No. 3 (Grace Street) – two 125 gpm Gorman Rupps centrifugal sewage pumps with 4” discharge and the Station has a manually cleaned bar screen.

No. 5 (Madison Avenue) – two 100 gpm Hydromatic self-priming pumps with 4” discharge. Station has a manual cleaned bucker screen.

Perry Cabin – nine duplex 15 gpm Environment – One Grinder Pump Station. Force main size from 1 1/4" to 3".

Treatment Plant:

The wastewater treatment plant is equipped with a Parkson bar screen, influent pump station (4,830 gpm) with three (3) dry pit submersible Flygt pumps, In-line grit removal system and flow equalization basin, two 4-stage Bardenpho oxidation ditches, 2-50 foot diameter final clarifiers, three rotating biological contractors, 2-30, diameter final clarifiers, six Dynasand continuous backwash sand filters, two bank ultraviolet (UV) radiation lights for disinfection and post aeration. There is one 25-foot diameter sludge thickener with one meter BDP belt filter press, one emergency holding pond for temporary storage of wastewater during maintenance of a unit process, and the lagoon is also used for wet weather flow equalization (capacity equals 1.64 million gallons or 2.45 days for design flow).

Capital improvements to the St. Michaels Wastewater Treatment Plant (WWTP) and sewer collection system are present in Table 24. Working with the Talbot County Sanitary District (TCSD), a 5-10 year capital improvement plan is developed. Due to the overall cost of many of the capital improvements, the County and the TCSD seek grant funding, low-interest loans and loan forgiveness through the Maryland Water Quality Infrastructure Finance Program. The MWQIF Program administers the State Revolving Funds – Federal Funding that can consist of low-interest loans and loan forgiveness, and grant funding through the Bay Restoration Fund (BRF) for Wastewater for WWTP operational grants and sewer extensions. In securing funding through the MWQIF Program, the capital project must be included in the Comprehensive Water and Sewer Plan (CWSP). MDE also administers grant funding through the BRF fund for individual properties or a small community on an as-needed basis after the amending the CWSP. In addition to seeking grant funding and loans through programs administered by MDE, Talbot County and the TCSD seek grant funding and low-interest loans through Rural Development, EPA through Federally Funded earmarks, along with other federal and programs where a project would comply with the loan and grant rules. In seeking funding through other federal and state sources, the capital improvement project needs to be included in the CWSP.

TABLE 24. TALBOT COUNTY REGION I SANITARY DISTRICT (UNIONVILLE, TUNIS MILLS, COPPERVILLE) CAPITAL IMPROVEMENT PROJECTS		
PROJECT DESCRIPTION	PROPOSED FISCAL YEAR	COMMENTS
Design and construction of a 0.66 MGD ENR WWTP	FY2002/2003	New ENR WWTP put into service in March 2008
Sewer Collection System Evaluation and Study	FY2002	Initiated work with RK&K and completed TV inspections of sewer lines in 2004
Outfall Pipe Inspections	FY2002	RK&K completed an inspection of the outfall pipe in 2004
Construction of 1 MGD BNR WWTP	FY2003	
Sewer Collection System Repairs	FY2003/2004/2005	Miscellaneous sewer collection improvements were made with funding was available through MDE
Pump Station No. 1 and No. 2 Upgrade	FY2004	Both Pump Stations were upgraded with a new force main connecting the two pump stations to the Region II Wastewater Treatment Plant. Project completed in 2005
Pump Station No. 1 Upgrade	FY2004	
Bellevue Generator Upgrade	FY2004	
Sewer Collection System Repairs	FY2004	
Watershed Analysis and Study	FY2005	Working with MDE, watershed implementation plans were developed with WWTP Goals for Region II to maintain a discharge or less than 2,000 pounds per year of Total Nitrogen and less than 200 pounds for Total Phosphorus in 2010
Sewer Collection System Repairs	FY2005	
Sewer Collection System inspections and sewer collection system rehabilitation and replacement	FY2018-2023	Talbot County secured funding through USDA Rural Development of about \$10.0 million to complete road improvements in

		the Town of St. Michaels, sewer collection system improvements along with the replacement of sewer lines to reduce inflow and infiltration.
Completed analysis of flow rates per equivalent dwelling units in the Region II Wastewater Systems	FY2019	The analysis found the flow per EDU was 114 gallons per day with 84 gallons being associated with wastewater and 30 gallons be associated with inflow and infiltration. The amount of I&I in 2018, the wettest year for the Region II WWTP equates to the 30 gallons/EDU for I&I.
Resolution 235 Sewer Extension – new force main infrastructure and new connections	FY2023/2024	MDE issued permits in 2022 with bidding for construction in 2023. New connections to occur in the summer of 2023
Belt Filter Press – Sludge Material Handling System Upgrades	FY2022/2023	Replaced the 40+ year old belt filter press and belt conveyor with a new belt filter press and screw conveyor for \$600,000.00
SCADA Upgrade for Resolution 250 and integrate into current SCADA system	FY2024-2028	\$200,000.00. Use new sensors and high level float systems to monitor newly installed force mains
Garage/Storage Facility with solar panels	FY2024-2028	\$150,000.00. – be charged against all Sanitary Districts
New tractor and sewer cleaning equipment	FY2024-2028	\$100,000.00– be charged against all Sanitary Districts
New Tanker Truck for emergency pump outs	FY2025-2030	\$250,000.00 – be charged against all Sanitary Districts

INSERT MAP – FIGURE 27