






Buntings Branch Watershed

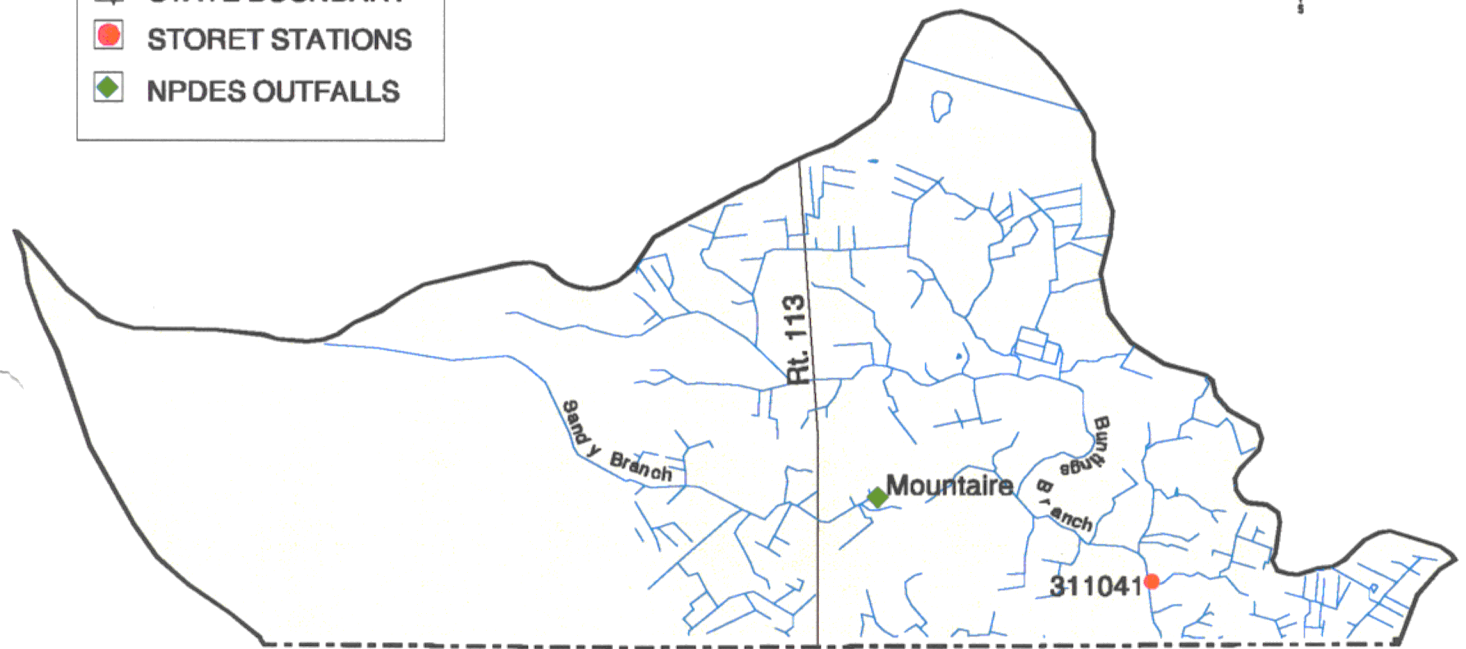
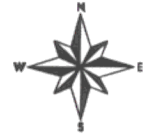
Inland Bays/Atlantic Ocean Basin

BUNTINGS BRANCH

Inland Bays Drainage Basin

LEGEND

-  ROADS
-  WATER
-  STATE BOUNDARY
-  STORET STATIONS
-  NPDES OUTFALLS



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Watershed: Buntings Branch

Basin: Inland Bays/Atlantic Ocean

Watershed Description:

Drainage Area: 6,300 acres

Total Stream Length: 11.0 miles

Mainstem Length: 4.0 miles

Receiving Waterbody: St. Martins River

Land Use:

Agricultural: 46%

Forest: 41%

Urban/Residential: 9%

Other: 4%

Summary:

The Buntings Branch watershed is located in the south central section of Sussex County. The Branch flows southward and crosses the Delaware-Maryland state line about one and one-quarter miles below Selbyville. About 3/4 of a mile below the Maryland state line it enters a body of water called Bishopville Prong. There are no major water impoundments in this watershed. Selbyville is the only incorporated town. The primary land uses outside of Selbyville are agricultural and conservation. Cypress Swamp, a unique natural feature, is located in this watershed.

Pathogens (as indicated by elevated Enterococcus levels), nutrients, physical habitat condition, low dissolved oxygen levels, and water supply are the main concerns in watershed.

Surface Water Quality Assessment:

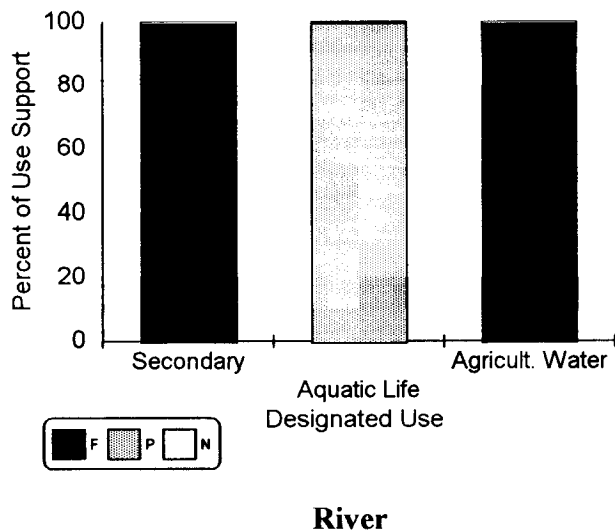
The average nitrogen and the average phosphorous concentrations were high while the average chlorophyll-a concentration was considered low.

Enterococcus bacteria levels fully supported 100% of the Secondary contact use for the 11.0 river miles assessed in the watershed.

Dissolved oxygen levels partially supported 100% of the Fish, Aquatic Life and Wildlife use for the 11.0 river miles assessed in the watershed. (See graph below)

Percent of Use Support per Designated Use:

The following graph depicts the percent of use support (F = Fully Supported; P = Partially Supported; N = Not Supported) for Buntings Branch.



Nonpoint Source Activities:

Following is a listing of activities in the watershed that have a potential to contaminate ground and/or surface waters. Included are assessments of the susceptibility of ground and/or surface waters to nonpoint source pollution according to soil types found in the watershed.

Agriculture

46 % of total watershed acreage is agricultural land.

Susceptibility according to soils: Moderate

Activities: Concentrations of animal production considered very high; predominantly corn-soybean-small grain rotation.

Overall concern rating: Very High

Initiatives: Designated watershed 1995-1997 for the Water Quality Improvement Program through the Consolidated Farm Services Agency.

Silviculture

41 % of total watershed acreage is forested.

Susceptibility according to soils: Moderate

Overall concern rating: High

Construction/Urban Runoff

Development expected: Low

Percent impervious area: 5 %; considered Low

Land Disposal (On-Site Wastewater Treatment Systems)

Total residential area: 558 acres

Residential area not sewered: 242 acres, by comparison with other watersheds, considered moderate

Susceptibility according to soils: High

Overall concern rating: Moderately High

Hydromodification

Area drained by tax ditches:

Existing 3,247 acres (51 % of total watershed acreage)

Overall concern rating: High

Soils/Slopes:

Much of the basin consists of freshwater wetlands. Soil types include predominantly Pocomoke-Woodstown-Fallsington association described by the Natural Resources Conservation Service as “very poorly drained and poorly drained soils that have a moderately permeable subsoil of sandy loam or sandy clay loam, and excessively drained soils that have a rapidly permeable sandy subsoil”. Extensively ditched.

Level with some relief in the Selbyville area.

Water Quality Analysis Summary for Buntings Branch

Watershed: Buntings Branch		Basin: Inland Bays																								
Segment	WBS Code	Size	Unit	Station	Assessed Parameters																					
					DO (mg/l)		pH (SU)		Temp. (C)		Bact. (# /100 ml)		TN (mg/l)		TP (mg/l)		Chl-a (ug/l)		Toxics		Fish Advisory		Biology		Habitat	
					10%	25%	10%	90%	Max	90%	G.M.	90%	Avg.	Avg.	90%	Avg.	Avg.	Avg.	%	BCI *	%	HCl **				
Buntings Branch, Headwaters to State Line	DE 070-001	11.09	Miles	311041 B973	5.5	6.0	6.0	7.2	22.5	21.9	345	693.2	4.89	0.140	4.43	--	--	--	--	--	--	96				

* % of Biological Community Index (BCI) -- % of Reference

** % of Habitat Community Index (HCl) -- % of Reference

Designated Use Support for Buntings Branch

Watershed: Buntings Branch				Basin: Inland Bays													
Segment	WBS Code	Size	Unit	Station	Designated Uses Support										Assessment Type (miles)		
					F=Fully Supported, P=Partially Supported, N= Not Supported, "--" =Not Designated										Monitored		Evaluated
					Primary Contact	Second. Contact	Aquatic life	ERES	Public Water Supply	Agricult. Supply	Industrial Supply	Harvestable Shellfish	Physical/ Chemical	Biology/ Habitat	Physical/ Chemical	Biology/ Habitat	
Buntings Branch, Headwaters to State Line	DE 070-001	11.09	Miles	311041 B973	--	F	P (DO)	--	--	F	--	--	4.6	2.6	6.5	8.5	

Designated Use Support for Buntings Branch

Watershed: Buntings Branch		Basin: Inland Bays																		
Segment	WBS Code	Size	Unit	Station	Assessed Parameters (Conventional Pollutants)															
					DO (mg/l) (Standard = 5.5 mg/l)			pH (Standard = 6.5 - 8.5)			Temperature (C) (Standard = 86 F or 30 C)			Enteroc. Bact. (Standard = 100#/100 ml)						
					Max.	Min.	Avg.	S.D.	Max.	Min.	Avg.	S.D.	Max.	Min.	Avg.	S.D.	Max.	Min.	G.M.	S.D.
Buntings Branch, Headwaters to State Line	DE 070-001	11.09	Miles	311041 B973	11.0	5.0	7.3	1.8	7.6	5.4	6.6	0.6	22.5	6.7	16.5	5.1	833	83	345	244

Water Quality Analysis Summary for Buntings Branch

Watershed: Buntings Branch				Basin: Inland Bays															
Segment	WBS Code	Size	Unit	Station	Assessed Parameters (Nutrients, Toxics, and Others)														
					Total Nitrogen (mg/l)					Total Phosphorous (mg/l)					Chlorophyll-a (ug/l)				
					Max.	Min.	Avg.	S.D.	Max.	Min.	Avg.	S.D.	Max.	Min.	Avg.	S.D.			
Buntings Branch, Headwaters to State Line	DE 070-001	11.09	Miles	311041 B973	9.73	1.82	4.89	2.43	0.286	0.049	0.140	0.070	5	1	4	1			