

Chapter 5

White Oak River Subbasin 03-05-05

Including: Core Sound and Atlantic Ocean

5.1 Subbasin Overview

Subbasin 03-05-05 at a Glance

Land and Water Area

Total area:	52 mi ²
Land area:	8 mi ²
Water area:	44 mi ²

Land Cover (percent)

Forest/Wetland:	14%
Surface Water:	84%
Urban:	0.2%
Cultivated Crop:	0%
Pasture/ Managed Herbaceous:	2%

County

Carteret

Municipalities

None

Monitored Waterbody Statistics

Recreation

Total:	91.0 mi/20,263.8 ac
Total Supported:	91.0 mi/20,263.8 ac

Shellfish Harvesting

Total:	22,575.2 ac
Total Supporting:	22,575.2 ac

This subbasin includes the eastern side of Core Sound and the southern side of Back Sound in Carteret County. The entire subbasin is estuarine. The land within this subbasin, Shackleford Banks, Cape Lookout and Core Banks, is part of the Cape Lookout National Seashore and is nearly undeveloped. A majority of the subbasin waters (20,686 acres) have been classified as Outstanding Resource Waters (ORW). A map of this subbasin including water quality sampling and NPDES locations are presented in Figure 11. Use support ratings for monitored waters are presented in Table 35.

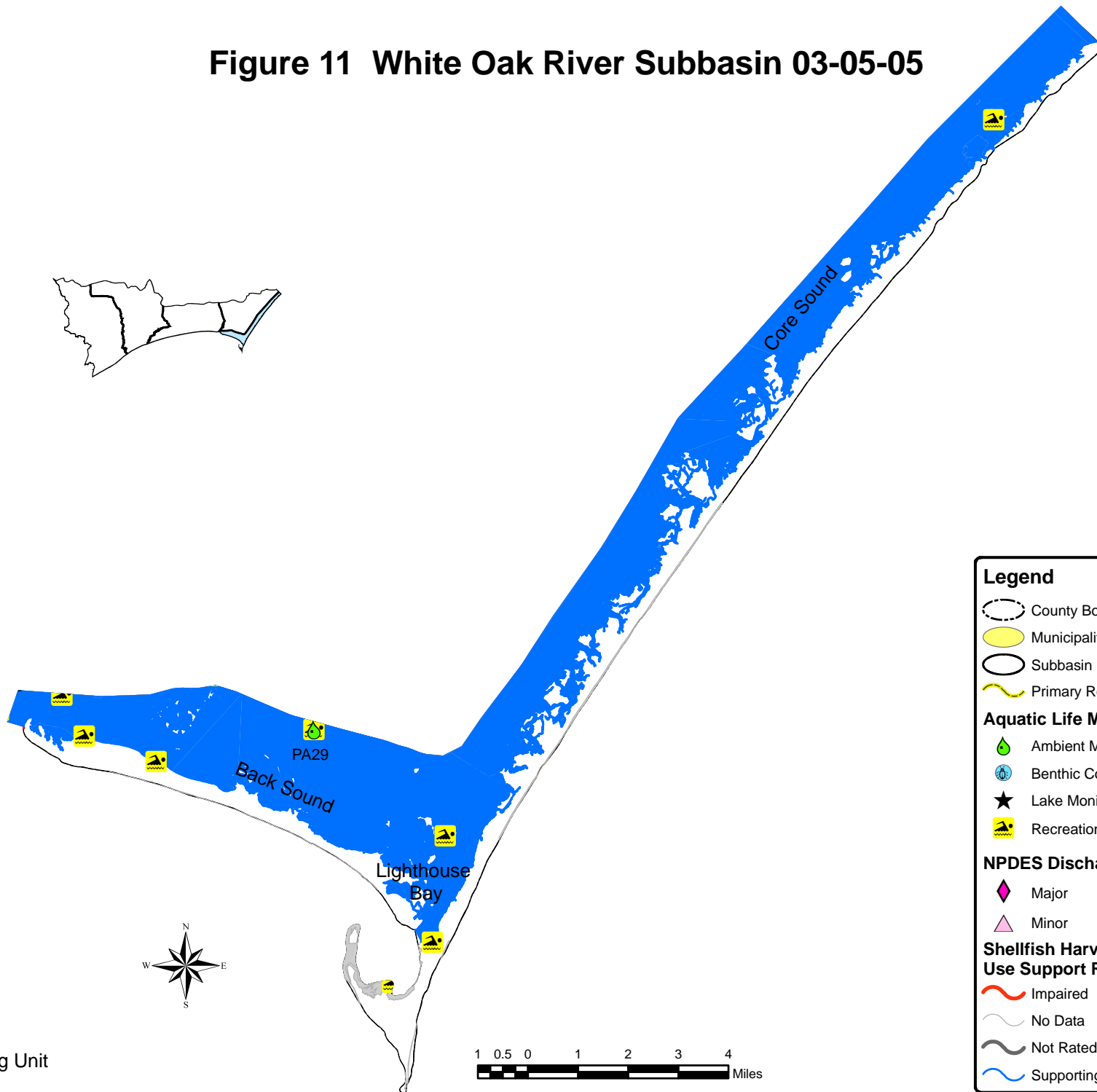
Because of the high quality water in this subbasin, there are no shellfish sanitation monitoring sites in the nearly 14,000 acres of Core Sound in this subbasin and all waters are open to shellfishing and therefore Supporting the shellfish harvesting category. The Division of Marine Fisheries classified the shellfish fishery in Back Sound as having Good commercial value, with oyster and clam production rated Good. The commercial value of Core Sound was Good to Excellent, with clam production rated Good to Excellent and oyster production rated Fair. The extensive grass beds of *Thalassia testudinum* and *Halodule wrightii* support the state's remaining scallop fishery.

DEH Recreation Monitoring data showed no exceedances of criteria and all waters are Supporting the recreation

category.

There are very few permanent residences in this subbasin and water quality is very good. There are no major discharges in this subbasin.

Figure 11 White Oak River Subbasin 03-05-05



Legend

- County Boundary
- Municipality
- Subbasin Boundary
- Primary Roads

Aquatic Life Monitoring

- Ambient Monitoring Station
- Benthic Community
- Lake Monitoring Station
- Recreation Areas

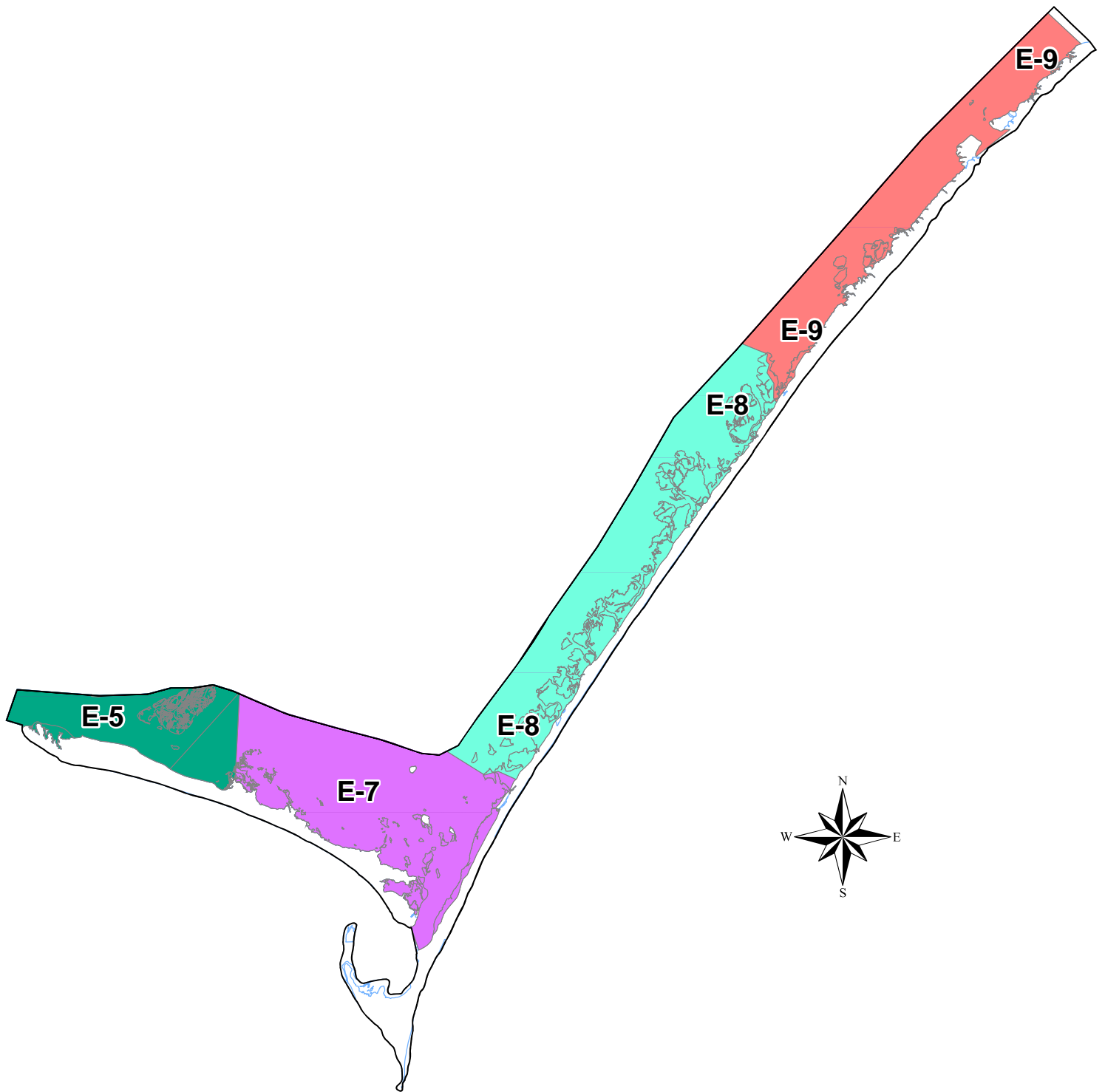
NPDES Dischargers

- Major
- Minor

Shellfish Harvesting/Aquatic Life Use Support Ratings

- Impaired
- No Data
- Not Rated
- Supporting

Figure 12 DEH Shellfish Growing Area Classifications in Subbasin 03-05-05



0 1.25 2.5 5 7.5 10 Miles

Planning Section
Basinwide Planning Unit
October 9, 2006

Table 35

WHITE OAK Subbasin 03-05-05

AU Number	Classification	Length/Area	Aquatic Life Assessment				Recreation Assessment			Shellfish Harvesting		Stressors	Sources
			AL Rating	Station	Result	Year/ Parameter % Exc	REC Rating	Station	Result	SH Rating	GA		
Description													
Atlantic Ocean													
99-(4)	SB	91.0 Coast Miles	ND					S	C10A	NCE			
									C11	NCE			
									C13	NCE			
									C2	NCE			
									C3	NCE			
									C3A	NCE			
									C4	NCE			
									C4A	NCE			
									C5	NCE			
									C6	NCE			
									C69B	NCE			
									C7	NCE			
									C8	NCE			
									C9	NCE			
									S30A	NCE			
									S30B	NCE			
<p>The waters of the Atlantic Ocean contiguous to that portion of the White Oak River Basin that extends from the northern boundary of White Oak River Basin (southwest side of Drum I)</p>													
Back Sound													
21-35-(0.5)c	SA HQW	1,480.8 S Acres	ND					S	C58	NCE	S	APP	E-5
<p>Portion of the following in subbasin 030505 From Newport River to a point on Shackleford Banks at lat. 34 40'57" and long 76 37'30" north to the western most point of Middle Marsh</p>													
21-35-(1.5)b	SA ORW	6,711.0 S Acres	ND					S	C59A	NCE	S	APP	E-5
<p>Portion of the following in subbasin 030505 From a point on Shackleford Banks at lat. 34 40'57" and long 76 37'30" north to the western most point of Middle Marshes and along the</p>													
Bald Hill Bay													
21-35-4	SA ORW	112.7 S Acres	ND					ND			S	APP	E-7
<p>Entire Bay</p>													

Table 35

WHITE OAK Subbasin 03-05-05

AU Number	Classification	Length/Area		Aquatic Life Assessment			Recreation Assessment			Shellfish Harvesting		Stressors	Sources
				AL Rating	Station	Result	Year/ Parameter % Exc	REC Rating	Station	Result	SH Rating		
Description													
Barden Inlet													
21-35-7-38	SA ORW	199.8	S Acres	ND				S	C69A	NCE	S	APP	
From Atlantic Ocean to Core Sound												E-7	
Blinds Hammock Bay													
21-35-6	SA ORW	71.2	S Acres	ND				ND			S	APP	
Entire Bay												E-7	
Cabs Creek													
21-35-3	SA ORW	46.1	S Acres	ND				ND			S	APP	
From source to Back Sound												E-7	
Caggs Creek													
21-35-7-34-1	SA ORW	21.8	S Acres	ND				ND			S	APP	
From source to Hogpen Bay												E-8	
Cedar Inlet													
21-35-7-8	SA ORW	70.0	S Acres	ND				ND			S	APP	
From Old Channel to Core Sound												E-9	
Codds Creek													
21-35-7-33	SA ORW	18.5	S Acres	ND				ND			S	APP	
From source to Core Sound												E-8	
Core Sound													
21-35-7e	SA ORW	11,872.2	S Acres	ND				S	C68 C75	NCE NCE	S	APP	
Portion of the following in subbasin 030505 from northern boundary of White Oak River Basin (a line from Hall Point to Drum Inlet) to Back Sound excluding conditionally approved												F-4	
Deer Pond													
21-35-7-27	SA ORW	31.2	S Acres	ND				ND			S	APP	
Entire pond												E-8	
Fortin Bay													
21-35-7-17	SA HQW	117.8	S Acres	ND				ND			S	APP	
Entire Bay												E-8	

Table 35

WHITE OAK Subbasin 03-05-05

AU Number	Classification	Length/Area		Aquatic Life Assessment				Recreation Assessment			Shellfish Harvesting		Stressors	Sources
				AL Rating	Station	Result	Year/ Parameter % Exc	REC Rating	Station	Result	SH Rating	GA		
Description														
Great Island Bay														
21-35-7-19	SA ORW	312.3	S Acres	ND				ND			S	APP		
Entire Bay														
Great Island Creek														
21-35-7-16	SA HQW	105.9	S Acres	ND				ND			S	APP		
From source to Core Sound														
Gutter Creek														
21-35-7-7	SA HQW	35.3	S Acres	ND				ND			S	APP		
From source to Core Sound														
Head of the Hold														
21-35-7-14	SA ORW	21.8	S Acres	ND				ND			S	APP		
Entire Bay														
Hogpen Bay														
21-35-7-34	SA ORW	78.3	S Acres	ND				ND			S	APP		
Entire Bay														
Horse Island Creek														
21-35-7-16-1	SA HQW	8.4	S Acres	ND				ND			S	APP		
From source to Great Island Creek														
Horsepen Creek														
21-35-7-28	SA ORW	26.3	S Acres	ND				ND			S	APP		
From source to Core Sound														
21-35-7-5	SA HQW	0.7	S Acres	ND				ND			S	APP		
From source to Core Sound														
Iron Creek														
21-35-7-36	SA ORW	30.8	S Acres	ND				ND			S	APP		
From source to Core Sound														
Johnson Bay														
21-35-5	SA ORW	91.8	S Acres	ND				ND			S	APP		
Entire Bay														

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AU Number	Classification	Length/Area		Aquatic Life Assessment				Recreation Assessment			Shellfish Harvesting		Stressors	Sources
				AL Rating	Station	Result	Year/ Parameter % Exc	REC Rating	Station	Result	SH Rating	GA		
Description														
Johnson Creek														
21-35-7-20	SA HQW	137.9	S Acres	ND				ND			S	APP		
From source to Core Sound													E-8	
Lewis Creek														
21-35-7-29	SA ORW	15.6	S Acres	ND				ND			S	APP		
From source to Core Sound													E-8	
Lighthouse Bay														
21-35-7-37	SA ORW	382.9	S Acres	ND				ND			S	APP		
Entire Bay													E-7	
Mullet Cove														
21-35-7-31	SA ORW	22.5	S Acres	ND				ND			S	APP		
Entire cove													E-8	
Negro Creek														
21-35-7-4	SA HQW	1.8	S Acres	ND				ND			S	APP		
From source to Core Sound													E-9	
Old Channel														
21-35-7-8-1	SA ORW	110.5	S Acres	ND				ND			S	APP		
From Core Sound to Cedar Inlet													E-9	
Rawson Creek														
21-35-7-35	SA ORW	17.3	S Acres	ND				ND			S	APP		
From source to Core Sound													E-8	
Sheep Pen Creek														
21-35-7-32	SA ORW	127.3	S Acres	ND				ND			S	APP		
From source to Core Sound													E-8	
21-35-7-6	SA HQW	0.6	S Acres	ND				ND			S	APP		
From source to Core Sound													E-9	
The Ditch														
21-35-6-1	SA ORW	87.1	S Acres	ND				ND			S	APP		
From Lighthouse Bay to Blinds Hammock Bay													E-7	

Table 35

WHITE OAK Subbasin 03-05-05

AU Number	Classification	Length/Area		Aquatic Life Assessment				Recreation Assessment			Shellfish Harvesting		Stressors	Sources
				AL Rating	Station	Result	Year/ Parameter % Exc	REC Rating	Station	Result	SH Rating	GA		
Description														
The Swash														
21-35-7-15	SA ORW	113.3	S Acres	ND				ND			S	APP		
Entire Bay													E-9	
Try Yard Creek														
21-35-7-33-1	SA ORW	8.1	S Acres	ND				ND			S	APP		
From source to Codds Creek													E-8	
Whale Creek														
21-35-2	SA ORW	33.7	S Acres	ND				ND			S	APP		
From source to Back Sound													E-5	
Yaupon Hammock Bay														
21-35-7-9	SA ORW	9.3	S Acres	ND				ND			S	APP		
Entire Gut													E-9	
Zack Creek														
21-35-7-30	SA ORW	42.3	S Acres	ND				ND			S	APP		
From source to Core Sound													E-8	

Use Categories:	Monitoring data type:	Results:	Use Support Ratings 2006:
AL - Aquatic Life	PF - Fish Community Survey	E - Excellent	S - Supporting, I - Impaired
REC - Recreation	PB - Benthic Community Survey	G - Good	NR - Not Rated
SH - Shellfish Harvesting	PA - Ambient Monitoring Site	GF - Good-Fair	NR*- Not Rated for Recreation (screening criteria exceeded)
	PL- Lake Monitoring	F - Fair	ND-No Data Collected to make assessment
	S, C- DEH RECMON	P - Poor	Results
		NI - Not Impaired	CE-Criteria Exceeded > 10% and more than 10 samples
GA - DEH SS Classification and Growing Area		S- Severe Stress	NCE-No Criteria Exceeded
APP- Approved		M-Moderate Stress	Miles/Acres
CAO- Conditionally Approved-Open		N- Natural	FW- Fresh Water
CAC- Conditionally Approved-Closed			S- Salt Water
PRO- Prohibited			

Aquatic Life Rating Summary				Recreation Rating Summary				Fish Consumption Rating Summary				Shellfish Harvesting Rating Summary			
ND	22,575.2	S Acres		S	m	20,263.8	S Acres	I	e	22,575.2	S Acres	S	m	22,575.2	S Acres
ND	91.0	Coast Mile		S	m	91.0	Coast Mile	I	e	91.0	Coast Mile				
				ND		2,311.4	S Acres								

5.2 Use Support Assessment Summary

All surface waters in the state are assigned a classification appropriate to the best-intended use of that water. Waters are regularly assessed by DWQ to determine how well they are meeting their best-intended use. In subbasin 03-05-05, use support was assigned for (1) fish consumption, (2) aquatic life, (3) recreation, and (4) shellfish harvesting, as noted below. For more information about use support methodology and a complete listing of monitored waters, refer to Appendix IV.

(1) All waters are Impaired on an evaluated basis in the fish consumption category because of a fish consumption advise that applies to the entire state. More information on fish consumption use support can be found in Chapter 7.

(2) Typically waters are assessed for supporting aquatic life using benthic macroinvertebrate sampling and ambient monitoring stations but because of the high water quality value in this subbasin there were no benthic macroinvertebrate community samples and no ambient monitoring stations collected during this assessment period. Refer to the *2005 White Oak River Basinwide Assessment Report* at <http://www.esb.enr.state.nc.us/Basinwide/WOA2005.pdf> and Appendix IV for more information on monitoring.

(3) All waters support recreation based on the DEH recreation monitoring program assessment as detailed in Chapter 7.

(4) All waters are open to shellfishing and therefore are Supporting in the shellfish harvesting category. There are no shellfish sanitation monitoring sites in the nearly 14,000 acres of Core Sound in this subbasin because of the high quality water in this subbasin. Refer to Figure 12 to identify growing area locations within this subbasin.

Table 36 contains a summary of use support ratings by category in subbasin 03-05-05, detailed use support information about specific AU#s and shellfish growing areas follows.

Table 36 Summary of Use Support Ratings by Category in Subbasin 03-05-05

Use Support Rating	Aquatic Life		Recreation		Shellfish Harvesting	
	Freshwater	Saltwater	Freshwater	Saltwater	Freshwater	Saltwater
Monitored Waters						
Supporting	0	0	0	91 mi 20,263.8 ac	0	22,575.2 ac
Total	0	0	0	91 mi 20,263.8 ac	0	22,575.2 ac
Unmonitored Waters						
No Data	0	91 mi 22,575.2 ac	0	2,311.4 ac	0	0
Total	0	91 mi 22,575.2 ac	0	2,311.4 ac	0	0
Totals						
All Waters*	0	91 mi 22,575.2 ac	0	91 mi 22,575.2 ac	0	22,575.2 ac

* The noted percent Impaired is the percent of monitored miles/acres only.

