Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 2.1: Summary of Beach Advisories, Nags Head

				Days Posted								
Station ID	Description	Ocean/Sound	Tier	1997	1998	1999	2000	2001	2002	2003	2004	2005
N16	Nags Head, Drain pipe mile post 10 1/2	Ocean	1	ND	ND	ND	ND	ND	ND	0	3	0
N17	Nags Head, Drain pipe across from Brew Thru	Ocean	1	0	0	0	0	0	0	ND	ND	0
N18	Nags Head Bath House	Ocean	1	0	0	0	0	0	0	1	0	0
N19A	Nags Head, Ramp S. of Jeannette's Pier	Ocean	1	0	0	0	0	0	0	ND	ND	0
N22	Drain Pipe at S. Nags Head/Federal Park Border	Ocean	1	0	0	0	0	0	0	62	20	0
N88	Jockey's Ridge Soundside Access	Sound	1	ND	ND	ND	ND	ND	ND	85	9	ND
N20	Roanoke Sound, Nags Head Watersports	Sound	2	0	0	0	0	0	0	ND	ND	ND
N20A	100 yrds ENE of Little Bridge, Causeway	Sound	2	ND	ND	ND	ND	ND	ND	ND	ND	0
N21	Roanoke Sound, Waterworks JetSki	Sound	2	0	28	90	0	0	0	ND	ND	ND
N21B	100 yrds. offshore of 7517 S. Va. Dare Trail	Sound	2	ND	ND	ND	ND	ND	ND	ND	ND	0

Source: Beach Advisory results provided by NC DENR staff, December 2004.

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Notes: ND = No Data; 2005 beach advisories reported through May 31.

Path: O:\proj-04\1477-W-NagsHeadNC\Reports\PrelimReport\Tables\CombinedAdvisoriesNagsHead.xls

Date/init: 1-10-05, pll; rev 6/17/05 anm

Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 4.1: Town-Wide Inspection Program Results

Inspection Result	2000	2001	2002	2003	2004	2005 (through May)	Date Unknown	Total
Failed	12 (6%)	36 (18%)	79 (39%)	49 (24%)	18 (9%)	8 (4%)	2 (1%)	204
Passed	34 (3%)	210 (20%)	328 (31%)	200 (19%)	199 (19%)	71 (7%)	26 (2%)	1068
Percent Failed	26	15	19	20	8	10	7	
Total Inspections	46	246	407	249	217	79	28	1272

Source: Inspection results database provided by Town of Nags Head Staff, 2000-2005.

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Path: O:\Proj-04\1477-W\Reports\FinalTechnicalReport\Tables\Table4.1_InspectionResults.xls

Date/init: 12/28/04 anm; updated 6/21/05 caw

Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 4.2: Distribution of Water Use Frequency Above 75% Design Flow by Property Class

Property Use	Seasonal	None	< 10%	10% - 25%	25% - 50%	50% - 75%	75% - 100%
Commercial	No	15 (9%)	15 (9%)	19 (12%)	34 (21%)	29 (18%)	51 (31%)
Commercial	Yes	0 (0%)	2 (14%)	1 (7%)	2 (14%)	2 (14%)	7 (50%)
Residential	No	762 (47%)	481 (29%)	220 (13%)	91 (6%)	46 (3%)	32 (2%)
Residential	Yes	305 (18%)	436 (26%)	532 (32%)	361 (22%)	26 (2%)	17 (1%)
Total		**1082 (31%)**	**934 (27%)**	**772 (22%)**	**488 (14%)**	**103 (3%)**	**107 (3%)**

Source: Water use records provided by Nags Head Planning Department, May 2005.

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Path: O:\Proj-04\1477-W\Reports\FinalTechnicalReport\Tables\Table4.2_WaterUseFrequency75.xls

Date/init: 12/28/04 anm; updated 6/21/05 caw

Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 4.3: Distribution of Peak Water Use Rate by Property Type

Property Use	Seasonal	< 50%	50% - 75%	75% - 100%	100%-150%	> 150%
Commercial	No	20 (12%)	9 (6%)	18 (11%)	23 (14%)	93 (57%)
Commercial	Yes	1 (7%)	0 (0%)	2 (14%)	1 (7%)	10 (71%)
Residential	No	920 (56%)	360 (22%)	167 (10%)	103 (6%)	82 (5%)
Residential	Yes	329 (20%)	598 (36%)	392 (23%)	236 (14%)	122 (7%)
Total		**1270 (36%)**	**967 (28%)**	**579 (17%)**	**363 (10%)**	**307 (9%)**

Source: Water use records provided by Nags Head Planning Department, May 2005.

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Path: O:\Proj-04\1477-W\Reports\FinalTechnicalReport\Tables\Table4.3_PeakWaterUse.xls

Date/init: 12/28/04 anm; updated 6/21/05 caw

Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 5.1: Summary of Water Quality Characteristics, Standards, and Guidelines

Water Quality Characteristic	Historic Background		Current Background		Expected Concentrations in Septic Tank Effluent[3]	Expected Soil Water Quality 3-5 feet Below Disposal Field[3]	Water Quality Standards[6]		Water Quality Guidelines for Surface Water[7]
	Groundwater	Surface Water[1]	Groundwater[2]	Surface Water			Groundwater	Surface Water	
Fecal Coliform (MPN/100 mL)	no data	no data	<1-4	no data	10^6-10^8	10^2-10^4	0	14 (shellfish waters) 200 (recreational	no guideline
Total Phosphorus (mg/L)	no data	no data	<0.01-0.3	no data	5-15	0.02-15	no standard	no standard	0.1 or less
Ammonia (mg/L)	no data	0.005 or less	<0.1-0.3	no data	12-50[(4)]	0-8[(5)]	no standard	no standard	0.4 or less
Nitrate (mg/L)	no data	0.25 or less	<0.01-0.3	no data	0.01-0.20	2-39 or more	10	no standard	0.4 or less
Dissolved Oxygen (mg/L)	no data	7.4-10.8	<0.01-3.0	no data	< 1	no data	no standard	4.8 or greater (less than 2.3 cannot support most aquatic life)	no guideline

Source: [1] US EPA STORET database, data from Roanoke Sound between 1973 and 1986.

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[2]Analytical results provided by Town of Nags Head Staff, 2001-2004.

[3]Values are from Tables 3-18 and 3-19 in US EPA, 2000 unless otherwise noted.

[4]Crites and Tchobanoglous, 1998.

[5]Ammonia beyond disposal field from http://www.pca.state.mn.us/water/groundwater/gwmap/septic.pdf and references contained therein.

[6]Standards are set by US EPA or by FDA and supported by NC DENR as noted in the text.

[7]Guidelines are not mandated, but are based on evaluation of natural background levels, historical water quality data, and on TMDL monitoring results from other areas of NC.

Notes: MPN/100 mL = most probable number per 100 milliliters; mg/L = milligrams per liter

Path: O:\Proj-04\1477-W\Data\WaterQualityGraphs\PreliminaryReport\WQSummary.xls

Date/init: 12-10-04, anm; rev 1-6-04 anm

Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 5.2: Summary of Historical Water Quality Data in Roanoke Sound

Sampling Station	Year	Ammonia-N (mg/L)	Nitrate + Nitrite-N (mg/L)	Dissolved Oxygen (mg/L)
ROANOKE SOUND AT MANTEO	1973	ND +/- NC	ND +/- NC	7.43 +/- 0.43
	1974	ND +/- NC	0.020 +/- 0.035	8.02 +/- 0.69
	1975	ND +/- NC	0.035 +/- 0.049	8.84 +/- 1.46
	1976	ND +/- NC	0.050 +/- 0.100	9.58 +/- 1.87
	1977	ND +/- NC	ND +/- NC	9.58 +/- 2.52
	1978	0.0010 +/- NC	0.178 +/- 0.194	8.80 +/- 2.17
	1979	ND +/- NC	ND +/- NC	10.31 +/- 1.80
	1980	ND +/- NC	0.060 +/- 0.053	9.41 +/- 1.58
	1981	0.0025 +/- 0.0025	0.043 +/- 0.051	8.84 +/- 1.77
	1982	0.0019 +/- 0.0029	0.014 +/- 0.024	9.10 +/- 2.40
	1983	0.0001 +/- 0.0003	0.020 +/- 0.032	9.35 +/- 2.10
	1984	0.0053 +/- 0.0059	0.013 +/- 0.019	9.04 +/- 1.71
	1985	0.0010 +/- 0.0014	0.008 +/- 0.010	9.03 +/- 1.84
	1986	0.0023 +/- 0.0015	0.028 +/- 0.042	8.93 +/- 2.17
ROANOKE SOUND AT HERRING SHOAL ISL NR NAGS HEAD	1973	0.0010 +/- NC	ND +/- NC	7.50 +/- 0.71
	1974	ND +/- NC	ND +/- NC	8.90 +/- 1.14
	1975	ND +/- NC	ND +/- NC	8.93 +/- 1.85
	1976	ND +/- NC	0.028 +/- 0.055	8.84 +/- 0.93
	1977	0.0010 +/- NC	0.050 +/- 0.030	10.80 +/- 3.80
	1978	0.0025 +/- 0.0007	0.043 +/- 0.053	9.20 +/- 1.60
	1979	0.0040 +/- NC	ND +/- NC	10.06 +/- 1.40
	1980	0.0037 +/- 0.0035	0.245 +/- 0.490	9.25 +/- 0.87
	1981	0.0040 +/- 0.0044	0.123 +/- 0.132	8.78 +/- 2.10
	1982	0.0023 +/- 0.0045	0.138 +/- 0.217	10.43 +/- 1.75
	1983	0.0005 +/- 0.0006	0.015 +/- 0.019	9.55 +/- 2.60
	1984	0.0007 +/- 0.0006	0.003 +/- 0.006	10.17 +/- 2.65

Source: US EPA STORET Database, downloaded on 11/29/2004.
Notes: ND = not detected; NC = not calculated; mg/L = milligrams per liter
Path: O:\Proj-04\1477-W\Data\RawData\WaterQuality\STORET\RoanokeSound.xls
Date/init: anm, 11/30/2004

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Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 5.3: Summary of Fresh Pond Water Quality Data

Indicator Bacterium and Year	Number of Samples	Minimum (MPN/100 mL)	Median (MPN/100 mL)	Geometric Mean (MPN/100 mL)	Standard Error	90th Percentile (MPN/100 mL)	Maximum (MPN/100 mL)
Enterococcus							
2001	8	15	188.1	1058	156	2419	2419
2002	23	3	195.1	952.1	365.4	2419.2	2419.2
2003	13	9.1	73.6	893.9	36.8	2098.6	2419.2
2004	24	6.1	201.3	909.9	224.2	2289.3	2419.2
2005 (Jan-April)	8	3	18.4	39.9	18.0	82.4	111.2
E. coli							
2001	8	8.6	95.7	132.0	102.7	313.3	365.4
2002	23	1	97.9	984.1	187.2	2419.2	2419.2
2003	13	1	15.9	222.4	11.0	156.7	816.4
2004	24	2	16.5	18.1	21.0	51.0	69.5
2005 (Jan-April)	8	3	13.4	852.3	6.3	744.0	2419.2

Source: Analytical results provided by Dare County Water Department staff, 2001-2005.

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Notes: MPN = most probable number, mL = milliliters.

Path: O:\Proj-04\1477-W\Reports\FinalTechnicalReport\Table5.3_FreshPondSoundsideAccess.xls

Date/init: 1-6-05 anm; rev 6-21-05 anm

Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 5.4: Summary of Sampling Program Results for pH

Monitoring Point	Number of Samples	Minimum pH	Mean pH +/- 1 Standard Deviation	Median (50th percentile) pH	90th Percentile	Maximum pH
Groundwater						
Nags Head Woods- G	128	3.9	7.1 +/- 0.7	7.1	7.8	8.4
Blackman-G	58	5.8	6.9 +/- 0.5	6.8	7.5	8.3
Curlew-G	48	5.9	6.7 +/- 0.5	6.7	7.1	8.1
Fire Station-G	57	6.2	7.3 +/- 0.4	7.3	7.8	8.1
Seachase-G	57	6.1	7.3 +/- 0.7	7.3	8.1	9.2
Baltic-G	27	6.1	7.0 +/- 0.4	7.0	7.3	7.8
Lost Colony #1-G	163	5.2	7.0 +/- 0.7	6.9	8.1	10.1
Lost Colony #2- G	169	5.2	7.0 +/- 0.7	6.8	8.0	9.0
Lost Colony #3-G	170	5.5	7.0 +/- 0.8	6.8	8.2	8.9
Lost Colony #4-G	169	4.5	6.8 +/- 0.8	6.6	7.9	8.8
Pamlico #1-G	67	5.9	7.7 +/- 0.8	7.7	8.7	9.9
Pamlico #2-G	65	5.7	7.7 +/- 0.8	7.5	8.6	10.0
Old Cove #1-G	187	3.7	7.4 +/- 0.6	7.4	8.1	9.7
Old Cove #2-G	187	3.7	7.3 +/- 0.7	7.3	8.2	9.9
Cobia Way#1-G	109	5.5	7.5 +/- 0.6	7.5	8.3	9.2
Cobia Way#2-G	109	4.9	7.4 +/- 0.6	7.5	8.2	8.8
Cobia Way#1a-G	70	6.1	7.1 +/- 0.5	7.1	7.7	8.7
Cobia Way#2a-G	71	4.4	7.0 +/- 0.6	7.0	7.6	8.7
AmberJack#1-G	186	6.0	7.5 +/- 0.5	7.5	8.1	8.9
AmberJack#2-G	187	6.0	7.4 +/- 0.5	7.4	8.0	9.5
S. Blue Marlin#1-G	124	6.1	7.5 +/- 0.6	7.5	8.3	9.9
S. Blue Marlin#2-G	123	6.5	7.5 +/- 0.7	7.4	8.3	11.5
Jeannette's Pier-G	68	4.1	7.9 +/- 0.8	8.0	8.8	9.2
Huron Access #1-G	169	3.8	7.7 +/- 0.7	7.8	8.3	10.5
Huron Access #2-G	169	0.8	7.6 +/- 0.9	7.7	8.3	9.0
Ida Access #1-G	166	6.0	7.8 +/- 0.6	7.8	8.5	10.5
Ida Access #2-G	169	3.7	8.0 +/- 0.7	8.0	8.8	9.1
Jay St. Access #1-G	166	4.7	7.8 +/- 0.5	7.8	8.4	9.2
Jay St. Access #2-G	167	4.6	7.8 +/- 0.6	7.9	8.4	9.2
Juncos St. Access#1-G	150	5.0	7.8 +/- 0.6	7.8	8.5	9.9
Juncos St. Access#2-G	158	5.8	7.5 +/- 0.5	7.5	8.1	9.3
Surface Water						
Old Cove #3-S	187	3.7	7.4 +/- 0.8	7.4	8.3	10.0
Cobia Way#3-S	109	4.7	6.9 +/- 0.6	6.9	7.7	8.2
Cobia Way#3a-S	71	6.1	7.6 +/- 0.6	7.5	8.4	9.2
AmberJack#3-S	186	5.4	7.5 +/- 0.9	7.5	8.4	10.2
S. Blue Marlin#3-S	123	4.0	7.1 +/- 0.7	7.0	8.2	9.1
Jeannette's Pier-S	57	4.2	7.8 +/- 0.8	7.9	8.6	8.9
Wrightsville#2-S	67	4.4	7.2 +/- 0.8	7.2	7.8	10.4
Wrightsville#1-S	66	2.6	7.0 +/- 1.0	7.2	7.9	8.3
NH Village area #2-S	64	5.1	7.5 +/- 0.8	7.4	8.4	9.0
N.Side of Ditch S.O.O.I.R.-S	163	4.0	7.9 +/- 0.9	8.0	9.0	10.3
S. Side of Ditch S.O.O.I.R.- S	162	4.9	7.6 +/- 0.8	7.5	8.6	10.1
Ocean outfall @ S.N.H.- S	102	5.0	7.1 +/- 0.9	7.0	8.1	9.6
Blue Fin Canal Drain -S	112	3.7	7.1 +/- 0.9	7.0	8.2	9.7
ONHC canal inlet area-S	106	4.5	7.6 +/- 0.7	7.5	8.4	9.9
NH Village area #1-S	65	5.5	7.5 +/- 0.6	7.5	8.2	8.6

Source: Analytical results provided by Town of Nags Head Staff, 2001-2005.
Notes: Results are sorted in order of discussion in the report text.
Path: O:\Proj-04\1477-W\Reports\FinalTechnicalReport\Tables\pHStats.xls
Date/init: 12-30-04 anm; rev 6-21-05 anm

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Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 5.5: Summary of Sampling Program Results for Field Temperature

Monitoring Point	Number of Samples	Minimum Temp. (°C)	Mean Temperature +/- 1 Standard Deviation (°C)	Median (50th percentile) Temperature (°C)	90th Percentile	Maximum Temp. (°C)
Groundwater						
Nags Head Woods- G	127	8.5	17.1 +/- 4.1	17.0	22.4	31.0
Blackman-G	58	12.1	18.6 +/- 4.1	18.9	24.0	24.7
Curlew-G	48	11.5	18.9 +/- 4.3	20.1	23.8	24.7
Fire Station-G	57	10.3	19.0 +/- 3.2	19.2	23.0	24.1
Seachase-G	57	8.5	20.0 +/- 4.5	20.8	24.8	27.1
Baltic-G	27	13.7	20.6 +/- 4	22.1	25.0	26.3
Lost Colony #1-G	164	10.0	19.1 +/- 4.0	19.6	24.0	28.0
Lost Colony #2- G	170	10.9	18.2 +/- 3.5	19.0	22.0	28.0
Lost Colony #3-G	171	0.1	18.2 +/- 4.2	19.0	23.0	27.0
Lost Colony #4-G	170	7.3	18.0 +/- 3.9	18.7	22.6	27.0
Pamlico #1-G	67	11.0	18.9 +/- 2.9	19.0	22.4	25.0
Pamlico #2-G	65	10.0	19.1 +/- 2.7	19.0	22.0	27.0
Old Cove #1-G	188	12.0	18.6 +/- 5.2	19.0	22.3	23.6
Old Cove #2-G	188	12.1	19.0 +/- 5.3	19.0	22.9	24.6
Cobia Way#1-G	109	13.2	19.1 +/- 2.7	19.0	22.2	24.0
Cobia Way#2-G	109	12.9	18.5 +/- 3.1	18.0	22.5	24.0
Cobia Way#1a-G	72	12.5	19.7 +/- 3.1	20.2	23.7	24.2
Cobia Way#2a-G	72	12.2	19.4 +/- 2.9	20.1	22.9	23.6
AmberJack#1-G	188	7.0	18.3 +/- 2.6	18.8	21.2	24.0
AmberJack#2-G	188	7.1	18.6 +/- 2.5	19.0	21.5	23.0
S. Blue Marlin#1-G	124	12.0	19.1 +/- 3.0	19.0	23.0	24.2
S. Blue Marlin#2-G	124	13.0	19.2 +/- 2.5	19.0	22.7	24.0
Jeannette's Pier-G	69	12.1	21.0 +/- 3.7	22.1	24.8	25.4
Huron Access #1-G	170	14.0	20.5 +/- 2.8	21.0	24.0	28.0
Huron Access #2-G	170	14.3	20.3 +/- 3.0	21.0	24.0	25.0
Ida Access #1-G	167	7.2	19.2 +/- 3.5	20.0	23.3	26.2
Ida Access #2-G	170	12.0	20.0 +/- 4.1	20.4	25.1	26.1
Jay St. Access #1-G	168	13.0	19.1 +/- 3.3	20.0	22.9	27.5
Jay St. Access #2-G	168	7.7	19.1 +/- 3.2	20.0	22.7	25.0
Juncos St. Access#1-G	151	12.0	20.3 +/- 3.6	21.0	24.6	26.2
Juncos St. Access#2-G	159	12.0	20.4 +/- 3.9	21.0	24.9	26.6
Surface Water						
Old Cove #3-S	187	2.1	19.4 +/- 8.5	19.5	27.7	27.4
Cobia Way#3-S	108	5.0	18.6 +/- 6.7	18.1	27.0	29.1
Cobia Way#3a-S	72	6.8	20.3 +/- 6.9	22.8	27.9	31.0
AmberJack#3-S	187	3.4	19.1 +/- 7.4	19.3	28.0	31.5
S. Blue Marlin#3-S	123	4.4	18.8 +/- 6.6	19.0	27.0	31.8
Jeannette's Pier-S	60	5.8	19.6 +/- 6.3	21.6	26.6	29.6
Wrightsville#2-S	67	7.6	18.2 +/- 5.6	19.7	24.6	27.1
Wrightsville#1-S	67	8.9	18.0 +/- 4.3	18.5	23.0	25.8
NH Village area #2-S	65	7.0	18.5 +/- 5.0	19.5	23.9	25.2
N.Side of Ditch S.O.O.I.R.-S	163	5.0	20.4 +/- 6.0	21.8	27.0	34.4
S. Side of Ditch S.O.O.I.R.- S	163	0.5	20.2 +/- 6.5	21.0	27.8	32.9
Ocean outfall @ S.N.H.- S	101	0.1	18.3 +/- 6.1	19.0	25.0	30.0
Blue Fin Canal Drain -S	111	6.0	19.6 +/- 8.1	19.0	26.0	25.7
ONHC canal inlet area-S	107	1.2	18.3 +/- 8.5	19.1	27.9	29.8
NH Village area #1-S	66	1.8	18.5 +/- 7.0	19.8	26.3	29.7

Source: Analytical results provided by Town of Nags Head Staff, 2001-2005.
Notes: °C = degrees Celsius
Results are sorted in order of discussion in the report text.
Path: O:\Proj-04\1477-W\Report\FinalTechnicalReport\Tables\FieldTempStats.xls
Date/init: 12/30/04 anm; rev 6/17/05 anm

STONE ENVIRONMENTAL, INC

Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 5.6: Summary of Sampling Program Results for Salinity

Monitoring Point	Number of Samples	Minimum Salinity (g/L)	Mean Salinity +/- 1 Standard Deviation (g/L)	Median (50th percentile) Salinity (g/L)	90th Percentile	Maximum Salinity (g/L)
Groundwater						
Nags Head Woods- G	128	0.0	0.1 +/- 0.2	0.0	0.1	1.0
Blackman-G	58	0.0	0.1 +/- 0.0	0.1	0.1	0.2
Curlew-G	48	0.0	0.3 +/- 0.3	0.3	0.5	1.5
Fire Station-G	57	0.0	0.2 +/- 0.1	0.2	0.4	0.4
Seachase-G	57	0.0	0.1 +/- 0.1	0.1	0.2	0.3
Baltic-G	27	0.2	0.3 +/- 0	0.4	0	0.5
Lost Colony #1-G	164	0.0	0.3 +/- 0.3	0.3	0.5	1.0
Lost Colony #2- G	170	0.0	0.2 +/- 0.3	0.1	0.2	3.2
Lost Colony #3-G	171	0.0	0.1 +/- 0.2	0.0	0.1	1.0
Lost Colony #4-G	170	0.0	0.1 +/- 0.2	0.1	0.2	1.0
Pamlico #1-G	67	0.0	0.2 +/- 1.0	0.0	0.0	8.0
Pamlico #2-G	65	0.0	0.3 +/- 1.6	0.0	0.0	11
Old Cove #1-G	188	0.0	0.3 +/- 0.4	0.3	0.5	4.0
Old Cove #2-G	188	0.0	0.2 +/- 0.6	0.2	0.3	8.0
Cobia Way#1-G	109	0.0	0.4 +/- 1.3	0.0	0.6	10
Cobia Way#2-G	109	0.0	0.3 +/- 1.2	0.0	0.4	12
Cobia Way#1a-G	72	0.0	0.1 +/- 0.1	0.1	0.2	0.4
Cobia Way#2a-G	72	0.0	0.1 +/- 0.0	0.1	0.2	0.2
AmberJack#1-G	188	0.0	0.6 +/- 1.4	0.2	1.0	11
AmberJack#2-G	188	0.0	0.5 +/- 0.5	0.2	1.1	3.0
S. Blue Marlin#1-G	124	0.0	0.4 +/- 1.0	0.2	1.0	7.0
S. Blue Marlin#2-G	124	0.0	0.3 +/- 0.9	0.1	0.4	7.5
Jeannette's Pier-G	69	0.2	1.3 +/- 4.3	0.5	0.9	29
Huron Access #1-G	170	0.0	0.2 +/- 0.2	0.3	0.5	1.0
Huron Access #2-G	170	0.0	0.2 +/- 0.2	0.2	0.3	1.0
Ida Access #1-G	167	0.0	0.3 +/- 0.6	0.2	0.6	7.8
Ida Access #2-G	170	0.0	0.1 +/- 0.2	0.1	0.3	1.0
Jay St. Access #1-G	168	0.0	0.4 +/- 0.6	0.2	1.0	3.0
Jay St. Access #2-G	168	0.0	0.5 +/- 1.1	0.3	1.0	12
Juncos St. Access#1-G	151	0.0	0.4 +/- 0.7	0.2	1.0	6.3
Juncos St. Access#2-G	159	0.0	0.7 +/- 1.3	0.5	1.0	9.0
Surface Water						
Old Cove #3-S	161	0.0	7.8 +/- 4.9	7.2	14	26
Cobia Way#3-S	109	0.0	9.2 +/- 4.4	8.5	15	24
Cobia Way#3a-S	45	0.7	3.7 +/- 2.7	2.8	7.8	10
AmberJack#3-S	161	0.0	8.2 +/- 5.0	8.0	14	26
S. Blue Marlin#3-S	123	0.0	8.4 +/- 4.9	8.0	14	25
Jeannette's Pier-S	39	0.2	19 +/- 6.2	19	26	29
Wrightsville#2-S	46	0.0	0.2 +/- 0.1	0.2	0.2	0.5
Wrightsville#1-S	46	0.2	0.2 +/- 0.1	0.2	0.3	0.5
NH Village area #2-S	44	0.0	0.4 +/- 1.5	0.1	0.2	10
N.Side of Ditch S.O.O.I.R.-S	138	0.0	1.9 +/- 2.5	1.0	5.0	14
S. Side of Ditch S.O.O.I.R.- S	138	0.0	6.0 +/- 8.2	2.1	22	31
Ocean outfall @ S.N.H.- S	98	1.0	22 +/- 9.5	26	31	40
Blue Fin Canal Drain -S	109	0.0	8.2 +/- 4.8	8.0	14	25
ONHC canal inlet area-S	80	0.7	6.0 +/- 4.4	5.3	12	20
NH Village area #1-S	45	0.0	0.5 +/- 1.2	0.2	0.5	8.2

Source: Analytical results provided by Town of Nags Head Staff, 2001-2005.

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Notes: g/L = grams per liter

Results are sorted in order of discussion in the report text.

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Date/init: 12/30/04 anm; rev 6/21/05 anm

Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 5.7: Summary of Sampling Program Results for Specific Conductivity

Monitoring Point	Number of Samples	Minimum Spec. Cond. (umhos/cm)	Mean Specific Conductivity +/- 1 Standard Deviation (umhos/cm)	Median (50th percentile) Spec. Cond (umhos/cm)	90th Percentile	Maximum Spec. Cond. (umhos/cm)
Groundwater						
Nags Head Woods- G	128	0	246 +/- 310	249	395	2850
Blackman-G	58	3	223 +/- 235	186	275	1922
Curlew-G	48	236	619 +/- 522	489	915	2824
Fire Station-G	57	4	399 +/- 182	384	676	790
Seachase-G	57	1	135 +/- 139	94	301	626
Baltic-G	27	368	631 +/- 167	666	860	919
Lost Colony #1-G	164	3	574 +/- 307	623	959	1101
Lost Colony #2- G	170	40	487 +/- 849	300	1100	10500
Lost Colony #3-G	171	0	98 +/- 130	74	126	999
Lost Colony #4-G	170	25	352 +/- 950	265	436	12000
Pamlico #1-G	67	65	164 +/- 263	120	193	2260
Pamlico #2-G	65	30	286 +/- 1124	114	188	9000
Old Cove #1-G	188	144	674 +/- 493	650	915	6500
Old Cove #2-G	188	24	513 +/- 1055	378	700	14400
Cobia Way#1-G	109	30	1150 +/- 2205	800	1100	16000
Cobia Way#2-G	109	255	911 +/- 2146	550	843	19000
Cobia Way#1a-G	72	1	222 +/- 151	191	329	1223
Cobia Way#2a-G	72	3	188 +/- 85	178	281	494
AmberJack#1-G	188	148	1280 +/- 2505	1000	1949	22870
AmberJack#2-G	188	4	1244 +/- 1735	1165	1890	19400
S. Blue Marlin#1-G	124	7	1068 +/- 1697	903	1320	15000
S. Blue Marlin#2-G	124	153	1032 +/- 2246	560	1123	15720
Jeannette's Pier-G	69	6	880 +/- 586	853	1215	4188
Huron Access #1-G	170	5	713 +/- 238	700	970	1960
Huron Access #2-G	170	10	655 +/- 261	600	1000	1311
Ida Access #1-G	167	254	749 +/- 913	700	1000	12000
Ida Access #2-G	170	1	382 +/- 317	307	614	3606
Jay St. Access #1-G	168	1	960 +/- 774	800	1533	4627
Jay St. Access #2-G	168	220	1004 +/- 700	819	1556	3689
Juncos St. Access#1-G	151	4	945 +/- 1131	645	1901	11120
Juncos St. Access#2-G	159	7	1041 +/- 465	1058	1444	3888
Surface Water						
Old Cove #3-S	188	5	7165 +/- 9282	1849	20000	34200
Cobia Way#3-S	109	5	11455 +/- 9127	11500	23936	37060
Cobia Way#3a-S	72	5	1286 +/- 1547	18	3745	4447
AmberJack#3-S	188	1	7419 +/- 9774	1889	20840	38400
S. Blue Marlin#3-S	123	0	10330 +/- 9755	11000	24000	35060
Jeannette's Pier-S	60	2	203 +/- 399	33	757	1623
Wrightsville#2-S	66	0	330 +/- 122	316	466	903
Wrightsville#1-S	67	2	447 +/- 506	385	503	4446
NH Village area #2-S	65	11	298 +/- 400	228	389	3170
N.Side of Ditch S.O.O.I.R.-S	164	2	1857 +/- 2437	1115	4021	20000
S. Side of Ditch S.O.O.I.R.- S	164	5	5754 +/- 9355	2966	19100	40900
Ocean outfall @ S.N.H.- S	102	5	30777 +/- 20135	36000	56820	82300
Blue Fin Canal Drain -S	112	5	10972 +/- 9615	10140	24446	39060
ONHC canal inlet area-S	107	5	732 +/- 1356	12	2704	4822
NH Village area #1-S	66	2	379 +/- 272	323	697	1573

Source: Analytical results provided by Town of Nags Head Staff, 2001-2005.

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Notes: umhos/cm = micromhos per centimeter

Results are sorted in order of discussion in the report text.

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Date/init: 12/30/04 anm; rev 6/21/05 anm

Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 5.8: Summary of Sampling Program Results for Turbidity

Monitoring Point	Number of Samples	Minimum Turbidity (NTU)	Mean Turbidity +/- 1 Standard Deviation (NTU)	Median (50th percentile) Turbidity (NTU)	90th Percentile	Maximum Turbidity (NTU)
Groundwater						
Nags Head Woods- G	128	0	59 +/- 79	41	125	420
Blackman-G	57	2	13 +/- 13	8	28	81
Curlew-G	47	1	8 +/- 9	6	15	58
Fire Station-G	57	2	12 +/- 24	6	21	183
Seachase-G	57	2	11 +/- 13	8	18	84
Baltic-G	27	2	11 +/- 10	8	23	40
Lost Colony #1-G	164	1	16 +/- 26	7	42	140
Lost Colony #2- G	170	0	12 +/- 24	7	23	250
Lost Colony #3-G	171	1	6 +/- 5	5	12	32
Lost Colony #4-G	170	0	14 +/- 16	7	35	75
Pamlico #1-G	67	1	15 +/- 11	14	23	61
Pamlico #2-G	65	1	15 +/- 10	14	24	46
Old Cove #1-G	188	0	7 +/- 12	4	13	150
Old Cove #2-G	187	0	6 +/- 6	4	13	50
Cobia Way#1-G	109	0	12 +/- 13	7	27	102
Cobia Way#2-G	109	1	21 +/- 20	12	50	90
Cobia Way#1a-G	72	2	9 +/- 10	5	24	54
Cobia Way#2a-G	72	1	9 +/- 11	5	21	55
AmberJack#1-G	188	0	11 +/- 11	9	22	85
AmberJack#2-G	187	0	7 +/- 5	6	14	30
S. Blue Marlin#1-G	123	0	9 +/- 9	7	17	70
S. Blue Marlin#2-G	124	0	7 +/- 6	6	13	47
Jeannette's Pier-G	69	1	6 +/- 5	5	12	26
Huron Access #1-G	170	0	10 +/- 15	6	23	156
Huron Access #2-G	170	1	9 +/- 9	6	19	49
Ida Access #1-G	167	0	10 +/- 9	7	24	55
Ida Access #2-G	170	0	8 +/- 10	6	18	93
Jay St. Access #1-G	168	0	10 +/- 10	7	24	54
Jay St. Access #2-G	168	0	8 +/- 8	7	16	83
Juncos St. Access#1-G	151	0	11 +/- 10	8	22	71
Juncos St. Access#2-G	159	1	14 +/- 13	9	27	88
Surface Water						
Old Cove #3-S	188	0	8 +/- 7	5	18	35
Cobia Way#3-S	109	1	5 +/- 6	3	12	40
Cobia Way#3a-S	72	2	10 +/- 5	10	18	22
AmberJack#3-S	187	0	7 +/- 6	5	16	27
S. Blue Marlin#3-S	123	1	7 +/- 8	5	15	51
Jeannette's Pier-S	60	4	26 +/- 15	27	44	64
Wrightsville#2-S	67	1	22 +/- 42	12	32	254
Wrightsville#1-S	66	2	105 +/- 102	75	231	475
NH Village area #2-S	64	2	21 +/- 33	16	35	271
N.Side of Ditch S.O.O.I.R.-S	164	0	15 +/- 29	7	27	227
S. Side of Ditch S.O.O.I.R.- S	164	1	10 +/- 12	6	27	70
Ocean outfall @ S.N.H.- S	102	0	11 +/- 13	6	32	61
Blue Fin Canal Drain -S	112	0	6 +/- 7	3	18	38
ONHC canal inlet area-S	107	1	14 +/- 10	12	25	56
NH Village area #1-S	66	1	18 +/- 14	14	34	76

Source: Analytical results provided by Town of Nags Head Staff, 2001-2005.

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Notes: NTU = nephelometric turbidity unit

Results are sorted in order of discussion in the report text.

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Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 5.X: Summary of Regression Analyses Between Precipitation and Water Quality Results

Dependent Variable (x)	Independent Variable (y)	Number of Paired Observations	Percent of Variation Explained (R^2)
Daily precipitation	Background Groundwater Fecal Coliform Results	326	0.08%
Daily precipitation	Groundwater Near Onsite Systems Fecal Coliform Results	3741	0.04%
Daily precipitation	Surface Water in Finger Canals Fecal Coliform Results	865	0.29%
Daily precipitation	Surface Water in Ditches Fecal Coliform Results	457	1.61%
30-day Running Total Precipitation	Background Groundwater Fecal Coliform Results	326	3.89%
30-day Running Total Precipitation	Groundwater Near Onsite Systems-Fecal Coliform Results	3741	1.59%
30-day Running Total Precipitation	Surface Water in Finger Canals-Fecal Coliform Results	865	2.39%
30-day Running Total Precipitation	Surface Water in Ditches-Fecal Coliform Results	457	0.55%
Daily precipitation	Background Groundwater Turbidity Results	326	0.02%
Daily precipitation	Groundwater Near Onsite Systems-Turbidity Results	3741	0.00%
Daily precipitation	Surface Water in Finger Canals-Turbidity Results	865	0.28%
Daily precipitation	Surface Water in Ditches-Turbidity Results	457	0.04%
30-day Running Total Precipitation	Background Groundwater Turbidity Results	326	1.90%
30-day Running Total Precipitation	Groundwater Near Onsite Systems-Turbidity Results	3741	0.92%
30-day Running Total Precipitation	Surface Water in Finger Canals-Turbidity Results	865	0.80%
30-day Running Total Precipitation	Surface Water in Ditches-Turbidity Results	457	1.04%

Source: Weather data, NOAA, 2005; Analytical results provided by Town of Nags Head Staff, 2001-2005.
Path: O:\Proj-04\1477-W\Reports/FinalTechnicalReport\Tables\WeatherWQAnalysis.xls
Date/init: 6/23/05 anm

Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 5.10: Summary of Sampling Program Results for Fecal Coliform

Monitoring Point	Number of Samples	Minimum Fecal Coliform (MPN/100 mL)	Median Fecal Coliform (MPN/100 mL)	Spring-Summer Geometric Mean Fecal Coliform (MPN/100 mL)	Annual Geometric Mean Fecal Coliform (MPN/100 mL)	Standard Error	Spring-Summer 80th Percentile	Maximum Fecal Coliform (MPN/100 mL)
Groundwater								
Nags Head Woods- G	129	ND	ND	ND	ND	7	ND	78
Blackman-G	56	ND	ND	1	1	8	ND	50
Curlew-G	46	ND	ND	2	1	29	2	200
Fire Station-G	56	ND	ND	6	3	322	115	1680
Seachase-G	56	ND	ND	2	2	12	11.4	66
Baltic-G	25	ND	ND	4	2	26	9	129
Lost Colony #1-G	161	ND	ND	4	2	1717	32	21000
Lost Colony #2- G	166	ND	ND	2	2	289	6	2060
Lost Colony #3-G	168	ND	ND	2	1	4273	4	55000
Lost Colony #4-G	167	ND	ND	2	1	4656	7	60000
Pamlico #1-G	67	ND	ND	ND	ND	58	ND	470
Pamlico #2-G	65	ND	ND	1	ND	285	ND	2300
Old Cove #1-G	186	ND	ND	2	1	224	5	2800
Old Cove #2-G	186	ND	ND	4	2	4644	42	53000
Cobia Way#1-G	109	ND	ND	3	2	6503	12	60000
Cobia Way#2-G	109	ND	ND	4	3	10690	43	89000
Cobia Way#1a-G	68	ND	ND	3	3	199	27	1200
Cobia Way#2a-G	69	ND	ND	5	4	171	56	1200
AmberJack#1-G	185	ND	ND	5	3	932	107	9500
AmberJack#2-G	185	ND	ND	3	2	5903	18	80000
S. Blue Marlin#1-G	124	ND	ND	2	1	3190	2	24100
S. Blue Marlin#2-G	124	ND	ND	2	2	21551	7	240000
Jeannette's Pier-G	65	ND	ND	4	3	343	13	2500
Huron Access #1-G	167	ND	ND	2	2	6963	10	90000
Huron Access #2-G	167	ND	ND	4	3	6203	94	80000
Ida Access #1-G	165	ND	ND	2	1	771	2	8200
Ida Access #2-G	167	ND	ND	2	1	265	2	2500
Jay St. Access #1-G	165	ND	ND	1	1	818	ND	8300
Jay St. Access #2-G	165	ND	ND	1	1	1547	ND	17000
Juncos St. Access#1-G	148	ND	ND	1	1	124	ND	1120
Juncos St. Access#2-G	157	ND	ND	1	1	1997	ND	25000
Surface Water								
Old Cove #3-S	186	ND	31	38	26	596	109	6000
Cobia Way#3-S	109	ND	34	53	31	188	218	1400
Cobia Way#3a-S	69	ND	35	51	34	132	110	632
AmberJack#3-S	185	ND	27	28	20	119	79	1100
S_ Blue Marlin#3-S	123	ND	36	43	30	1263	118	14000
Jeannette's Pier-S	58	ND	22	48	22	543	240	3120
Wrightsville#2-S	65	4	114	266	124	1014	1200	6000
Wrightsville#1-S	65	ND	70	159	75	1713	1120	12000
NH Village area #2-S	62	ND	96	151	68	747	732	4000
N_Side of Ditch S_O_O_I_R_-S	163	ND	60	71	41	637	600	6000
S_ Side of Ditch S_O_O_I_R_- S	161	ND	176	238	126	1236	965	10800
Ocean outfall @ S_N_H_- S	102	ND	5	10	6	358	91	3200
Blue Fin Canal Drain -S	112	ND	24	28	19	172	104	1200
ONHC canal inlet area-S	106	ND	31	46	27	115	158	820
NH Village area #1-S	65	ND	176	252	151	1556	1200	9000

Source: Analytical results provided by Town of Nags Head Staff, 2001-2005.
Notes: MPN = most probable number, mL = milliliters.
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Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 5.11: Summary of Sampling Program Results for Total Phosphorus

Monitoring Point	Number of Samples	Minimum Total P (mg/L)	Mean Total P +/- 1 Standard Deviation (mg/L)	Median (50th percentile) Total P (mg/L)	90th Percentile	Maximum Total P (mg/L)
Groundwater						
Nags Head Woods- G	129	ND	0.36 +/- 0.43	0.25	0.61	3.53
Blackman-G	56	0.04	0.15 +/- 0.13	0.11	0.19	0.85
Curlew-G	46	ND	0.17 +/- 0.21	0.13	0.20	1.19
Fire Station-G	56	0.20	0.85 +/- 0.26	0.85	1.17	1.47
Seachase-G	56	0.05	0.14 +/- 0.06	0.12	0.23	0.32
Baltic-G	25	0.05	1.94 +/- 1.21	1.81	3.76	4.18
Lost Colony #1-G	161	ND	3.61 +/- 4.49	1.88	8.50	27.4
Lost Colony #2- G	167	ND	0.42 +/- 0.51	0.28	0.97	3.00
Lost Colony #3-G	168	ND	0.10 +/- 0.18	0.04	0.20	1.50
Lost Colony #4-G	167	ND	0.45 +/- 0.38	0.33	0.99	2.23
Pamlico #1-G	67	ND	0.16 +/- 0.18	0.10	0.34	1.10
Pamlico #2-G	65	ND	0.11 +/- 0.10	0.09	0.23	0.57
Old Cove #1-G	186	ND	1.70 +/- 1.07	1.70	2.65	9.67
Old Cove #2-G	186	0.03	0.61 +/- 0.44	0.51	1.23	3.20
Cobia Way#1-G	109	0.02	2.21 +/- 1.43	2.00	3.92	11.0
Cobia Way#2-G	109	0.02	1.40 +/- 0.73	1.55	2.11	3.45
Cobia Way#1a-G	70	ND	0.20 +/- 0.45	0.09	0.23	3.08
Cobia Way#2a-G	69	ND	0.07 +/- 0.16	0.05	0.10	1.31
AmberJack#1-G	185	0.04	1.05 +/- 0.73	0.82	2.17	3.19
AmberJack#2-G	185	0.05	1.30 +/- 1.11	0.88	2.75	8.74
S. Blue Marlin#1-G	124	ND	1.76 +/- 0.80	1.80	2.70	3.86
S. Blue Marlin#2-G	124	0.08	1.66 +/- 1.49	1.43	2.56	16.0
Jeannette's Pier-G	64	ND	2.17 +/- 1.41	1.99	3.71	7.97
Huron Access #1-G	167	ND	1.55 +/- 0.99	1.47	2.51	7.32
Huron Access #2-G	167	ND	1.79 +/- 3.02	1.43	2.87	4.60
Ida Access #1-G	165	ND	0.19 +/- 0.50	0.07	0.26	5.30
Ida Access #2-G	167	ND	0.16 +/- 0.40	0.04	0.19	1.95
Jay St. Access #1-G	165	ND	0.08 +/- 0.18	0.05	0.13	1.70
Jay St. Access #2-G	165	ND	0.07 +/- 0.15	0.04	0.10	1.25
Juncos St. Access#1-G	148	ND	0.18 +/- 0.37	0.09	0.27	2.78
Juncos St. Access#2-G	157	ND	0.16 +/- 0.28	0.07	0.35	2.41
Surface Water						
Old Cove #3-S	186	ND	0.09 +/- 0.13	0.06	0.15	1.10
Cobia Way#3-S	109	ND	0.20 +/- 0.72	0.07	0.27	7.30
Cobia Way#3a-S	69	ND	0.12 +/- 0.27	0.07	0.20	2.23
AmberJack#3-S	185	ND	0.12 +/- 0.25	0.07	0.19	1.75
S. Blue Marlin#3-S	123	ND	0.19 +/- 0.30	0.10	0.37	2.05
Jeannette's Pier-S	59	ND	0.23 +/- 0.44	0.10	0.45	2.08
Wrightsville#2-S	65	0.05	2.76 +/- 14.8	0.65	1.60	120
Wrightsville#1-S	65	ND	0.70 +/- 1.38	0.35	1.33	10.8
NH Village area #2-S	60	ND	0.41 +/- 0.45	0.24	1.00	1.96
N.Side of Ditch S.O.O.I.R.-S	162	ND	0.36 +/- 0.41	0.22	0.83	1.94
S. Side of Ditch S.O.O.I.R.- S	161	ND	0.30 +/- 0.24	0.27	0.54	2.00
Ocean outfall @ S.N.H.- S	102	ND	0.19 +/- 0.29	0.08	0.43	2.00
Blue Fin Canal Drain -S	111	ND	0.10 +/- 0.10	0.07	0.21	0.69
ONHC canal inlet area-S	106	ND	0.09 +/- 0.12	0.06	0.16	0.97
NH Village area #1-S	65	0.05	0.76 +/- 0.84	0.47	1.75	4.15

Source: Analytical results provided by Town of Nags Head Staff, 2001-2005.

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Notes: mg/L = milligrams per liter

Results are sorted in order of discussion in the report text.

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Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 5.12: Summary of Sampling Program Results for Ammonia

Monitoring Point	Number of Samples	Minimum Ammonia (mg/L)	Mean Ammonia +/- 1 Standard Deviation (mg/L)	Median (50th percentile) Ammonia (mg/L)	90th Percentile	Maximum Ammonia (mg/L)
Groundwater						
Nags Head Woods- G	129	ND	0.2 +/- 0.2	ND	0.3	2.0
Blackman-G	56	ND	0.4 +/- 0.1	0.4	0.5	0.7
Curlew-G	46	0.2	2.6 +/- 1.4	2.8	4.3	5.5
Fire Station-G	56	ND	ND +/- 0.0	ND	ND	ND
Seachase-G	56	ND	ND +/- 0.0	ND	ND	0.2
Baltic-G	25	ND	2.3 +/- 2	2.0	5.0	8.5
Lost Colony #1-G	161	ND	7.4 +/- 11.5	0.6	26.9	44.2
Lost Colony #2- G	167	ND	0.4 +/- 0.9	0.2	0.9	6.6
Lost Colony #3-G	168	ND	ND +/- 0.4	ND	ND	5.6
Lost Colony #4-G	167	ND	1.6 +/- 2.8	0.2	5.0	13.7
Pamlico #1-G	67	ND	ND +/- 0.0	ND	ND	0.2
Pamlico #2-G	65	ND	ND +/- 0.1	ND	ND	0.8
Old Cove #1-G	186	ND	0.1 +/- 0.5	ND	0.1	5.0
Old Cove #2-G	186	ND	ND +/- 0.0	ND	ND	0.3
Cobia Way#1-G	109	ND	ND +/- 0.1	ND	0.1	0.6
Cobia Way#2-G	109	ND	ND +/- 0.1	ND	0.2	1.1
Cobia Way#1a-G	70	ND	ND +/- 0.0	ND	ND	ND
Cobia Way#2a-G	69	ND	ND +/- 0.0	ND	ND	ND
AmberJack#1-G	185	ND	ND +/- 0.1	ND	ND	1.4
AmberJack#2-G	185	ND	ND +/- 0.1	ND	ND	1.7
S. Blue Marlin#1-G	124	ND	ND +/- 0.1	ND	ND	0.5
S. Blue Marlin#2-G	124	ND	ND +/- 0.1	ND	0.1	0.8
Jeannette's Pier-G	65	ND	ND +/- 0.0	ND	ND	ND
Huron Access #1-G	167	ND	ND +/- 0.4	ND	ND	4.5
Huron Access #2-G	167	ND	0.3 +/- 1.7	ND	0.3	20
Ida Access #1-G	165	ND	ND +/- 0.2	ND	ND	1.7
Ida Access #2-G	167	ND	0.1 +/- 0.2	ND	ND	1.9
Jay St. Access #1-G	165	ND	0.2 +/- 1.2	ND	ND	13.7
Jay St. Access #2-G	165	ND	0.7 +/- 3.9	ND	0.1	30
Juncos St. Access#1-G	148	ND	0.2 +/- 0.9	ND	0.2	8.7
Juncos St. Access#2-G	157	ND	6.2 +/- 36.5	ND	4.4	398
Surface Water						
Old Cove #3-S	186	ND	ND +/- 0.2	ND	0.2	1.6
Cobia Way#3-S	109	ND	ND +/- 0.1	ND	0.1	0.7
Cobia Way#3a-S	69	ND	0.1 +/- 0.1	ND	0.2	0.8
AmberJack#3-S	185	ND	ND +/- 0.1	ND	ND	1.3
S. Blue Marlin#3-S	123	ND	ND +/- 0.1	ND	ND	0.8
Jeannette's Pier-S	59	ND	ND +/- 0.0	ND	ND	ND
Wrightsville#2-S	65	ND	1.3 +/- 0.8	1.2	2.2	3.8
Wrightsville#1-S	65	ND	0.7 +/- 0.4	0.6	1	3.3
NH Village area #2-S	62	ND	0.2 +/- 0.2	ND	0.3	1.1
N.Side of Ditch S.O.O.I.R.-S	163	ND	0.2 +/- 0.4	ND	0.6	3.5
S. Side of Ditch S.O.O.I.R.- S	161	ND	0.4 +/- 0.5	0.34	0.9	3.8
Ocean outfall @ S.N.H.- S	102	ND	0.3 +/- 0.7	ND	0.5	5.9
Blue Fin Canal Drain -S	112	ND	0.2 +/- 0.9	ND	0.2	8.4
ONHC canal inlet area-S	106	ND	ND +/- 0.1	ND	ND	0.8
NH Village area #1-S	65	ND	0.4 +/- 0.6	0.2	0.9	2.9

Source: Analytical results provided by Town of Nags Head Staff, 2001-2005.
Notes: mg/L = milligrams per liter
Results are sorted in order of discussion in the report text.
Path: O:\Proj-04\1477-W\Report\FinalTechnicalReport\Tables\AmmoniaStats.xls
Date/init: 10-15-04, anm; rev 6-17-05 anm

STONE ENVIRONMENTAL, INC

Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 5.13: Summary of Sampling Program Results for Nitrate

Monitoring Point	Number of Samples	Minimum Nitrate (mg/L)	Mean Nitrate +/- 1 Standard Deviation (mg/L)	Median (50th percentile) Nitrate (mg/L)	90th Percentile	Maximum Nitrate (mg/L)
Groundwater						
Nags Head Woods- G	129	ND	0.21 +/- 0.40	0.05	0.49	3.43
Blackman-G	56	0.01	0.04 +/- 0.08	0.01	0.12	0.46
Curlew-G	46	0.01	0.12 +/- 0.28	0.01	0.22	1.23
Fire Station-G	56	0.01	3.86 +/- 3.72	2.22	7.81	19.9
Seachase-G	56	0.01	0.72 +/- 0.90	0.36	1.77	4.74
Baltic-G	25	0.10	6.42 +/- 7.0	2.80	17.1	25.6
Lost Colony #1-G	161	ND	6.33 +/- 10.6	1.20	22.2	53.1
Lost Colony #2- G	167	ND	0.52 +/- 1.09	0.06	1.39	7.71
Lost Colony #3-G	168	ND	0.28 +/- 2.50	0.03	0.20	32.4
Lost Colony #4-G	167	ND	0.12 +/- 0.19	0.03	0.34	1.60
Pamlico #1-G	67	ND	0.36 +/- 0.28	0.35	0.63	1.69
Pamlico #2-G	65	ND	0.41 +/- 0.7	0.25	0.6	3.50
Old Cove #1-G	186	ND	8.00 +/- 11.2	2.98	19.6	70.8
Old Cove #2-G	186	ND	1.37 +/- 1.58	0.79	3.66	8.15
Cobia Way#1-G	109	ND	3.77 +/- 3.74	2.15	8.76	16.5
Cobia Way#2-G	109	ND	2.86 +/- 2.74	1.96	6.69	13.0
Cobia Way#1a-G	70	0.23	3.69 +/- 2.25	3.63	6.95	9.70
Cobia Way#2a-G	69	0.10	2.84 +/- 2.03	2.26	4.96	9.93
AmberJack#1-G	185	ND	1.62 +/- 1.48	1.00	4.04	8.89
AmberJack#2-G	185	ND	2.35 +/- 1.92	1.72	5.1	8.92
S. Blue Marlin#1-G	124	ND	3.86 +/- 4.29	1.96	10.3	19.8
S. Blue Marlin#2-G	124	ND	3.09 +/- 3.88	1.61	9.19	21.3
Jeannette's Pier-G	65	0.01	3.41 +/- 3.70	1.55	8.9	13.9
Huron Access #1-G	167	0.01	4.80 +/- 7.98	2.31	10.8	71.0
Huron Access #2-G	167	ND	3.89 +/- 4.67	2.20	8.92	23.7
Ida Access #1-G	165	0.04	1.18 +/- 1.01	0.88	2.49	5.20
Ida Access #2-G	167	0.01	1.01 +/- 1.03	0.68	2.27	5.3
Jay St. Access #1-G	165	ND	0.93 +/- 1.36	0.63	2.00	14.7
Jay St. Access #2-G	165	0.01	1.20 +/- 1.73	0.75	2.68	19.4
Juncos St. Access#1-G	148	ND	0.70 +/- 1.69	0.33	1.23	19.3
Juncos St. Access#2-G	157	ND	3.87 +/- 6.43	0.79	11.8	32.8
Surface Water						
Old Cove #3-S	186	ND	0.22 +/- 0.72	0.05	0.36	5.40
Cobia Way#3-S	109	ND	0.32 +/- 0.92	0.08	0.54	8.20
Cobia Way#3a-S	69	0.01	0.74 +/- 1.46	0.28	1.07	7.99
AmberJack#3-S	185	ND	0.21 +/- 0.42	0.07	0.56	3.65
S. Blue Marlin#3-S	123	ND	0.12 +/- 0.15	0.06	0.29	0.73
Jeannette's Pier-S	59	0.01	0.18 +/- 0.42	0.04	0.52	2.79
Wrightsville#2-S	65	0.01	0.34 +/- 0.43	0.11	1.07	1.64
Wrightsville#1-S	64	0.01	0.28 +/- 0.29	0.19	0.67	1.34
NH Village area #2-S	60	0.01	0.21 +/- 0.45	0.06	0.32	2.23
N.Side of Ditch S.O.O.I.R.-S	163	ND	0.47 +/- 0.57	0.28	1.14	4.10
S. Side of Ditch S.O.O.I.R.- S	161	ND	0.26 +/- 0.31	0.17	0.61	1.90
Ocean outfall @ S.N.H.- S	102	ND	0.10 +/- 0.15	0.06	0.25	0.75
Blue Fin Canal Drain -S	112	ND	0.15 +/- 0.22	0.07	0.38	1.70
ONHC canal inlet area-S	106	0.01	0.11 +/- 0.30	0.03	0.21	2.78
NH Village area #1-S	65	0.01	0.30 +/- 0.40	0.14	0.90	1.79

Source: Analytical results provided by Town of Nags Head Staff, 2001-2005.
Notes: mg/L = milligrams per liter.
Results are sorted in order of discussion in the report text.
Path: O:\Proj-04\1477-W\Data\WaterQualityGraphs\PreliminaryReport\NitrateStats.xls
Date/init: 11-02-04, anm; rev 6-21-05 anm

STONE ENVIRONMENTAL, INC

Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 5.14: Summary of Sampling Program Results for Dissolved Oxygen

Monitoring Point	Number of Samples	Minimum Dissolved Oxygen (mg/L)	Mean Dissolved Oxygen +/- 1 Standard Deviation (mg/L)	Median (50th percentile) Dissolved Oxygen (mg/L)	90th Percentile	Maximum Dissolved Oxygen (mg/L)
Groundwater						
Nags Head Woods- G	128	0.25	3.78 +/- 2.62	3.18	7.22	16.0
Blackman-G	58	0.03	0.40 +/- 0.66	0.27	0.67	4.85
Curlew-G	48	0.04	0.39 +/- 0.46	0.23	0.87	2.35
Fire Station-G	57	0.01	0.94 +/- 2.02	0.43	1.47	14.8
Seachase-G	57	0.95	2.34 +/- 1.28	2.13	3.40	8.41
Baltic-G	27	0.10	0.70 +/- 0.78	0.46	1.33	4.12
Lost Colony #1-G	164	0.06	2.42 +/- 2.60	0.78	6.10	12.5
Lost Colony #2- G	169	0.00	2.58 +/- 2.85	0.99	6.70	13.0
Lost Colony #3-G	170	0.01	3.06 +/- 2.82	2.67	6.92	13.0
Lost Colony #4-G	168	0.00	2.37 +/- 2.68	0.68	6.33	13.1
Pamlico #1-G	67	0.05	7.03 +/- 2.12	7.90	8.74	12.2
Pamlico #2-G	65	2.30	7.30 +/- 1.91	7.93	8.60	12.2
Old Cove #1-G	187	0.00	3.00 +/- 2.55	2.59	6.84	11.8
Old Cove #2-G	187	0.00	2.76 +/- 2.55	2.01	6.50	11.5
Cobia Way#1-G	109	0.00	4.82 +/- 2.47	4.90	7.42	11.5
Cobia Way#2-G	109	0.62	4.54 +/- 2.25	4.31	7.12	11.1
Cobia Way#1a-G	71	1.29	3.77 +/- 1.74	3.21	5.60	11.4
Cobia Way#2a-G	71	1.06	3.07 +/- 1.68	2.60	5.05	12.7
AmberJack#1-G	187	0.06	2.83 +/- 2.33	2.24	6.54	10.1
AmberJack#2-G	187	0.03	2.47 +/- 2.60	1.08	6.22	11.7
S. Blue Marlin#1-G	124	0.03	5.64 +/- 2.14	3.80	7.10	24.1
S. Blue Marlin#2-G	124	0.00	3.22 +/- 2.86	3.43	7.17	11.4
Jeannette's Pier-G	69	0.19	2.06 +/- 1.37	2.04	3.60	7.63
Huron Access #1-G	169	0.29	3.94 +/- 2.42	3.48	7.12	15.7
Huron Access #2-G	170	0.04	3.41 +/- 2.55	3.25	6.71	15.6
Ida Access #1-G	167	0.16	4.05 +/- 2.79	4.17	7.50	15.5
Ida Access #2-G	170	0.01	4.05 +/- 2.80	3.63	7.51	15.8
Jay St. Access #1-G	167	0.56	4.24 +/- 2.38	4.02	7.28	11.3
Jay St. Access #2-G	167	0.37	3.70 +/- 2.28	3.50	6.80	10.2
Juncos St. Access#1-G	150	0.00	3.05 +/- 2.93	2.75	7.30	11.3
Juncos St. Access#2-G	158	0.01	2.52 +/- 2.75	0.83	6.73	12.0
Surface Water						
Old Cove #3-S	187	0.00	7.17 +/- 3.66	7.10	12.0	15.8
Cobia Way#3-S	109	0.00	7.44 +/- 3.61	7.42	11.9	15.8
Cobia Way#3a-S	71	0.23	5.56 +/- 3.33	4.84	10.8	13.3
AmberJack#3-S	187	0.00	7.24 +/- 4.11	7.40	11.8	31.4
S. Blue Marlin#3-S	123	0.00	6.90 +/- 3.63	7.17	11.4	16.5
Jeannette's Pier-S	60	1.55	6.27 +/- 2.60	6.44	9.25	14.5
Wrightsville#2-S	66	0.01	1.28 +/- 1.44	0.67	2.91	6.81
Wrightsville#1-S	67	0.00	1.84 +/- 1.57	1.47	3.91	6.68
NH Village area #2-S	65	0.00	1.73 +/- 1.64	1.35	3.90	8.19
N.Side of Ditch S.O.O.I.R.-S	164	0.00	4.33 +/- 4.30	3.19	10.5	17.7
S. Side of Ditch S.O.O.I.R.- S	163	0.07	8.03 +/- 5.67	6.60	14.7	32.4
Ocean outfall @ S.N.H.- S	102	1.30	7.52 +/- 3.25	8.07	11.4	17.0
Blue Fin Canal Drain -S	112	0.00	6.58 +/- 3.29	7.00	10.9	13.5
ONHC canal inlet area-S	106	0.34	8.40 +/- 4.73	6.99	14.9	18.7
NH Village area #1-S	66	0.02	3.44 +/- 4.34	1.40	10.2	15.9

Source: Analytical results provided by Town of Nags Head Staff, 2001-2005.
Notes: mg/L = milligrams per liter
Results are sorted in order of discussion in the report text.
Path: O:\Proj-04\1477-W\Report\FinalTechnicalReport\Tables\DOStats.xls
Date/init: 12-09-04, anm; rev 6-17-05 anm

STONE ENVIRONMENTAL, INC

Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 5.15: Summary of Sampling Program Results by Monitoring Point

				Fecal Coliform					Total Phosphorus					Ammonia					Nitrate					Dissolved Oxygen				
						Exceedances of Water Quality Standard					Exceedances of Water Quality Guideline					Exceedances of Water Quality Guideline					Exceedances of Water Quality Standard					Exceedances of Water Quality Standard		
Monitoring Point	Total Number of Samples	Total Monthly Data Points	Position Relative to System	Overall Trend	Above or Below Background	No.	%	Response to Natural Conditions	Overall Trend	Above or Below Background	No.	%	Response to Natural Conditions	Overall Trend	Above or Below Background	No.	%	Response to Natural Conditions	Overall Trend	Above or Below Background	No.	%	Response to Natural Conditions	Overall Trend	Above or Below Background	No.	%	Response to Natural Conditions
Groundwater																												
Nags Head Woods- G	129	48	n/a	increase	at/below	0	0%	---	decrease	at/below	no guide		---	---	at/below	no guide		---	---	below	0	0%	---	decrease	at/below	no guide		---
Blackman-G	56	24	n/a	increase	at/below	0	0%	---	decrease	at/below	no guide		---	---	at/below	no guide		---	---	below	0	0%	---	---	at/below	no guide		---
Curlew-G	46	19	n/a	decrease	at/below	0	0%	---	decrease	at/below	no guide		---	increase	above	no guide		---	---	below	0	0%	---	---	at/below	no guide		---
Fire Station-G	56	24	n/a	increase	at/below	2	8%	WL	increase	above	no guide		---	---	at/below	no guide		---	---	above	1	4%	---	increase	at/below	no guide		---
Seachase-G	56	28	n/a	decrease	at/below	0	0%	---	decrease	at/below	no guide		---	---	at/below	no guide		---	---	at/below	0	0%	---	increase	at/below	no guide		---
Baltic-G	25	10	cross-gradient	decrease	at/below	0	0%	---	increase	above	no guide		WL, T?	increase	above	no guide		WL, T?	increase	above	2	20%	WL, T?	---	at/below	no guide		---
Lost Colony #1-G	161	52	downgradient	decrease	above	1	2%	P (02)	increase	above	no guide		---	increase	above	no guide			increase	above	14	27%	---	decrease	at/above	no guide		---
Lost Colony #2- G	166	52	cross-gradient	decrease	above	0	0%	P (02)	---	above	no guide		---	increase	at	no guide		---	decrease	at	0	0%	---	decrease	at/above	no guide		---
Lost Colony #3-G	168	52	downgradient	decrease	above	1	2%	P (02)	---	at/above	no guide		---	---	at	no guide		---	---	at/below	0	0%	---	decrease	at/above	no guide		---
Lost Colony #4-G	167	52	downgradient	decrease	above	1	2%	P (02)	increase	at/above	no guide		---	increase	above	no guide		---	decrease	at/below	0	0%	---	decrease	at/above	no guide		---
Pamlico #1-G	67	16	upgradient	decrease	above	0	0%	---	decrease	at	no guide		---	---	at	no guide		---	increase	at/above	0	0%	---	increase	above	no guide		---
Pamlico #2-G	65	16	upgradient	decrease	above	0	0%	---	decrease	at	no guide		---	---	at	no guide		---	increase	at/above	0	0%	---	increase	above	no guide		---
Old Cove #1-G	186	52	downgradient	---	above	0	0%	P (02, 04)	increase	above	no guide		---	---	at	no guide		---	increase	above	16	31%	---	decrease	at/above	no guide		---
Old Cove #2-G	186	52	downgradient	---	above	1	2%	P (02)	decrease	above	no guide		---	---	at	no guide		---	---	above	0	0%	---	decrease	at/above	no guide		---
Cobia Way#1-G	109	25	downgradient	increase	above	2	8%	---	increase	above	no guide		---	---	below	no guide		---	increase	above	0	0%	---	decrease	at/above	no guide		---
Cobia Way#2-G	109	25	downgradient	increase	above	2	8%	---	increase	above	no guide		---	---	below	no guide		---	increase	above	0	0%	---	decrease	at/above	no guide		---
Cobia Way#1a-G	68	24	downgradient	increase	above	0	0%	P (04)	---	at/below	no guide		---	---	below	no guide		---	increase	above	0	0%	---	decrease	at/above	no guide		---
Cobia Way#2a-G	69	24	downgradient	decrease	above	0	0%	P (04)	---	at/below	no guide		---	---	below	no guide		---	increase	above	0	0%	---	---	at/above	no guide		---
AmberJack#1-G	185	52	downgradient	increase	above	2	4%	P (02)	increase	above	no guide		---	---	below	no guide		---	increase	above	1	2%	---	decrease	at/above	no guide		---
AmberJack#2-G	185	52	downgradient	---	above	1	2%	P (02)	increase	above	no guide		---	---	below	no guide		---	increase	above	3	6%	P, WL?	decrease	at/above	no guide		---
S_ Blue Marlin#1-G	124	28	downgradient	increase	above	2	7%	P (02)	increase	above	no guide		---	---	below	no guide		---	increase	above	1	4%	---	decrease	at/above	no guide		---
S_ Blue Marlin#2-G	124	28	downgradient	increase	above	1	4%	P (02)	increase	above	no guide		---	---	below	no guide		---	increase	above	1	4%	---	decrease	at/above	no guide		---
Jeannette's Pier-G	65	23	upgradient	---	above	0	0%	---	increase	above	no guide		---	---	below	no guide		---	increase	above	2	9%	T, WL?	decrease	at/above	no guide		---
Huron Access #1-G	167	52	downgradient	increase	above	0	0%	P (02)	decrease	above	no guide		---	---	below	no guide		---	---	above	5	10%	---	decrease	at/above	no guide		---
Huron Access #2-G	167	52	downgradient	---	above	2	4%	P (02)	decrease	above	no guide		---	---	below	no guide		---	decrease	above	3	6%	---	decrease	at/above	no guide		---
Ida Access #1-G	165	52	cross-gradient	increase	above	0	0%	P (02)	---	below	no guide		---	decrease	below	no guide		---	---	above	0	0%	---	decrease	at/above	no guide		---
Ida Access #2-G	167	52	cross-gradient	---	above	0	0%	P (02)	---	below	no guide		---	decrease	below	no guide		---	increase	above	0	0%	---	decrease	at/above	no guide		---
Jay St_ Access #1-G	165	52	upgradient	increase	above	0	0%	P (02)	decrease	below	no guide		---	---	below	no guide		---	decrease	above	0	0%	---	decrease	at/above	no guide		---
Jay St_ Access #2-G	165	52	cross-gradient	---	above	0	0%	P (02)	decrease	below	no guide		---	decrease	below	no guide		---	decrease	above	0	0%	---	decrease	at/above	no guide		---
Juncos St_ Access#1-G	148	46	upgradient	increase	above	0	0%	P (02)	decrease	below	no guide		---	---	at/below	no guide		---	---	above	0	0%	---	decrease	at/above	no guide		---
Juncos St_ Access#2-G	157	46	downgradient	---	above	0	0%	P (02)	decrease	below	no guide		---	decrease	at/above	no guide		---	increase	above	6	13%	---	decrease	at/above	no guide		---
Surface Water																												
Old Cove #3-S	186	52	downgradient	decrease	no bg	1	2%	Temp	increase	no bg	8	15%	---	---	no bg	1	2%	---	decrease	at/below	4	8%	---	decrease	at/lower	1	2%	Temp
Cobia Way#3-S	109	25	downgradient	decrease	no bg	1	4%	Temp	---	no bg	11	44%	---	---	no bg	0	0%	---	---	at/below	3	12%	---	---	at/lower	2	8%	Temp
Cobia Way#3a-S	69	24	downgradient	---	no bg	0	0%	Temp	increase	no bg	4	17%	---	---	no bg	1	4%	---	increase	at/above	11	46%	---	decrease	at/lower	2	8%	Temp
AmberJack#3-S	185	52	downgradient	---	no bg	0	0%	Temp	---	no bg	14	27%	---	---	no bg	0	0%	---	---	at/below	5	10%	---	decrease	at/lower	3	6%	Temp
S_ Blue Marlin#3-S	123	28	downgradient	increase	no bg	1	4%	Temp,P(02)?	---	no bg	14	50%	---	---	no bg	0	0%	---	---	at/below	1	4%	---	decrease	at/lower	2	7%	Temp
Jeannette's Pier-S	58	23	downgradient	decrease	no bg	2	9%	Temp	decrease	no bg	8	35%	---	---	no bg	0	0%	---	---	at/below	4	17%	---	---	at/higher	2	9%	---
Blue Fin Canal Drain -S	112	31	n/a	---	no bg	0	0%	---	increase	no bg	5	16%	---	---	no bg	0	0%	---	increase	at/above	4	13%	---	decrease	at/lower	2	6%	Temp
ONHC canal inlet area-S	106	33	n/a	---	no bg	1	3%	Temp,P(04)?	decrease	no bg	3	9%	---	---	no bg	0	0%	---	---	at/below	0	0%	---	decrease	at/lower	0	0%	Temp
NH Village area #1-S	65	33	n/a	decrease	no bg	15	45%	P(02)	increase	no bg	27	82%	---	increase	no bg	8	24%	---	increase	at/below	9	27%	---	decrease	lower	23	70%	Temp?
Wrightsville#1-S	65	32	n/a	increase	no bg	8	25%	Temp	decrease	no bg	26	81%	---	decrease	no bg	26	81%	---	decrease	above	5	16%	---	---	lower	22	69%	Temp?
Wrightsville#2-S	65	32	n/a	decrease	no bg	11	34%	Temp	---	no bg	27	84%	---	increase	no bg	25	78%	---	increase	above	13	41%	---	---	lower	22	69%	Temp?
NH Village area #2-S	62	32	n/a	decrease	no bg	11	34%	Temp	decrease	no bg	24	75%	---	---	no bg	1	3%	---	increase	at/below	3	9%	---	increase	lower	24	75%	---
N_Side of Ditch S_O_O_I_R_-S	163	50	n/a	decrease	no bg	9	18%	Temp,P(02)	decrease	no bg	39	78%	---	decrease	no bg	5	10%	---	increase	at/above	21	42%	---	decrease	at/lower	27	54%	Temp
S_ Side of Ditch S_O_O_I_R_- S	161	50	n/a	---	no bg	21	42%	Temp	---	no bg	40	80%	---	increase	no bg	17	34%	---	increase	at/above	7	14%	---	decrease	at/lower	15	30%	Temp
Ocean outfall @ S_N_H_- S	102	35	n/a	increase	no bg	7	20%	Temp,P(02)	increase	no bg	11	31%	---	increase	no bg	3	9%	---	increase	at/below	0	0%	---	decrease	at/lower	5	14%	Temp

Source: Analytical results provided by Town of Nags Head Staff, 2001-2005.

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Notes: Applicable background levels, standards, and guidelines are shown in Table 5.1.

n/a = not applicable; no bg = no background data available for comparative purposes; no guide = No water quality guideline is available for comparative purposes

Responses to natural conditions: P = water quality parameter concentrations increased during heavy precipitation events (year of event in parenthesis)

WL = water quality parameter concentrations increased during periods of increased water table elevation

T = water quality parameter changed in response to tidal fluctuations

Temp = water quality parameter changed in response to fluctuations in water temperature

? = relationship occurs, but is muted or not entirely consistent across the dataset

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Date/init: 11-02-04, anm; rev 06-30-05

Nags Head Decentralized Wastewater Management Plan
Town of Nags Head, North Carolina
Table 6.1: Summary of Onsite System Characteristics and Impacts on Groundwater Quality

Well Cluster	# Systems in Zone of Influence	Potentially Impacted Water Body	System Type	System Performance	System Age		Excessive Water Use		# Systems in Zone of Influence	Inspections in Zone of Influence			Depth to Groundwater		Monitoring Wells Placed to Capture Impact	Observed Onsite System Impacts on Local Groundwater Quality			
					Local	Regional	Local	Regional		Total	Failed	Percent Failed	Local	Regional		Fecal Coliform	Total P	Ammonia	Nitrate
Baltic	8	Ocean	I/A (Peat Filter)	Good	2004	1960-2004	No	63%	8	1	1	100%	4.5	4.8	Partial	1	3	3	3
Lost Colony 1	16	Ocean	Conventional	Good	2001	1979-2004	Yes	62%	16	6	0	0%	2.0	2.3	Partial	3	3	3	3
Lost Colony 2	12	Ocean	Conventional	Poor	1978	1978-2004	Yes	45%	12	4	1	25%	2.2	2.6	Yes	3	2	3	1
Pamlico	11	Ocean	Conventional	Good	2002	1975-2003	No	10%	11	5	4	80%	7.1	6.1	No	1	1	1	1
Old Cove	11	Sound	Conventional	Good	1985	1972-2003	Yes	18%	11	7	0	0%	5.6	4.5	Yes	3	3	1	3
Cobia Way	12	Sound	Conventional	Good	1970	1970-1989	Yes	15%	13	6	1	17%	11.0	7.2	Yes	3	3	2	2
Cobia Way A	12	Sound	Conventional	Good	2000	1972-2002	No	50%	12	4	0	0%	6.6	7.7	Yes	2	1	1	2
Amberjack	10	Sound	Conventional	Good	1984	1976-2003	No	0%	10	5	2	40%	6.5	5.2	Partial	3	3	1	2
S. Blue Marlin	11	Sound	Conventional	Good	1981	1976-2004	No	27%	11	2	0	0%	6.5	6.1	Yes	3	3	1	3
Jeannette's Pier	4	Ocean	I/A (LPP)	Good	1962	1947-1970	No	75%	4	0	0	0%	5.0	5.5	No	2	3	1	2
Huron Access	4	Both	I/A (LPP)	Good	1983	1987-2000	Yes	25%	4	2	0	0%	6.7	7.2	Partial	3	3	2	3
Ida Access	10	Sound	Conventional	Unknown	1976	1968-1999	No	20%	10	4	2	50%	4.4	7.4	Partial	2	1	1	2
Jay St. Access	5	Sound	Conventional	Unknown	1960	1960-2001	No	60%	5	3	0	0%	4.7	4.8	Partial	2	1	1	2
Juncos St. Access	8	Sound	I/A (LPP)	Good	1999	1986-2002	Yes	50%	8	2	1	50%	2.1	2.6	Partial	1	2	3	3

Source: Inspections, water use data, and water quality sampling program results provided by Town of Nags Head Staff, 1999-2005.
Onsite system characteristics from Town of Nags Head staff and from NC DENR permit database.
Depths to groundwater estimated from Digital Elevation Model data, June 2004-April 2005 groundwater level data, and other sources as specified in text.

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Notes: For the "observed onsite system impacts on local groundwater quality", rankings were assigned as follows: High = 3, Low = 2, None = 1.
Criteria for the rankings are as follows:
Fecal Coliform: High = elevated summers, 1 or more exceedances of the recreational water quality standard. Low = elevated summers but no exceedances. None = elevated summers not consistently observed.
Total P: High = 90th percentile greater than 2 mg/L. Low = 90th percentile between 0.3-2 mg/L. None = 90th percentile less than 0.3 mg/L.
Nitrate: High = 90th percentile at or above drinking water quality standard. Low = 90th percentile between 2-10 mg/L. None = 90th percentile less than 2 mg/L.
Ammonia: High = 90th percentile at or above 1 mg/L. Low: 90th percentile between 0.2-0.9 mg/L. None: 90th percentile is 0.1 mg/L.

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