

APPENDIX 2-A

USE SUPPORT RATINGS FOR ALL MONITORED WATERBODIES 2010 DRAFT

DRAFT 2010 IR CATEGORY	INTEGRATED REPORTING CATEGORIES FOR INDIVIDUAL ASSESSMENT UNIT/USE SUPPORT CATEGORY/PARAMETER ASSESSMENTS. A SINGLE AU CAN HAVE MULTIPLE ASSESSMENTS DEPENDING ON DATA AVAILABLE AND CLASSIFIED USES.
1	All designated uses are monitored and supporting
1b	Designated use was impaired, other management strategy in place and no standards violations for the parameter of interest (POI)
1nc	DWQ have made field determination that parameter in exceedance is due to natural conditions
1r	Assessed as supporting watershed is in restoration effort status
1t	No criteria exceeded but approved TMDL for parameter of interest
2	Some designated uses are monitored and supporting none are impaired Overall only
2b	Designated use was impaired other management strategy in place and no standards violations Overall only
2r	Assessed as supporting watershed is in restoration effort status overall only
2t	No criteria exceeded but approved TMDL for POI Overall only
3a	Instream/monitoring data are inconclusive (DI)
3b	No Data available for assessment
3c	No data or information to make assessment
3n1	Chlorophyll a exceeds TL value and SAC is met-draft
3n2	Chlorophyll a exceeds EL value and SAC is not met first priority for further monitoring-draft
3n3	Chlorophyll a exceeds threshold value and SAC is not met first second priority for further monitoring-draft
3n4	Chlorophyll a not available determine need to collect-draft
3t	No Data available for assessment -AU is in a watershed with an approved TMDL
4b	Designated use impaired other management strategy expected to address impairment
4c	Designated use impaired by something other than pollutant
4cr	Recreation use impaired no instream monitoring data or screening criteria exceeded
4cs	Shellfish harvesting impaired no instream monitoring data- no longer used
4ct	Designated use impaired but water is subject to approved TMDL or under TMDL development
4s	Impaired Aquatic Life with approved TMDL for Aquatic Life POI or category 5 listing
4t	Designated use impaired approved TMDL
5	Designated use impaired because of biological or ambient water quality standards violations and needing a TMDL
5r	Assessed as impaired watershed is in restoration effort status

Catawba River Basin 2010 NC 305(b) Report

All Waters in NC are in Category 5-303(d) List for Mercury due to statewide fish consumption advice for several fish species

AU_Number	AU_Name	AU_Description	LengthArea	AU_Units	Classification
IR Cat	Parameter	Reason for Rating	Use Category	Collection Year	303(d)year
Catawba River Basin		South Fork of the Catawba River Subbasin		03050102	
Catawba River Basin		Henry Fork Watershed		0305010201	
⊙ 11-129-1-(12.5)a	Henry Fork	From Laurel Creek to State Route 1124	10.3	FW Miles	C
1	Ecological/biological Integrity Benthos	Good Bioclassification	Aquatic Life	2006	
⊙ 11-129-1-(12.5)b	Henry Fork	From State Route 1124 to State Route 1143	4.8	FW Miles	C
1	Ecological/biological Integrity Benthos	Good Bioclassification	Aquatic Life	2006	
1	Fecal Coliform (recreation)	No Criteria Exceeded	Recreation	2008	
5	Low pH	Standard Violation	Aquatic Life	2008	2008
5	Turbidity	Standard Violation	Aquatic Life	2008	2010

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AU_Number	AU_Name	AU_Description	LengthArea	AU_Units	Classification
IR Cat	Parameter	Reason for Rating	Use Category	Collection Year	303(d)year
⊙ 11-129-1-(2)	Henry Fork	From Morganton Water Intake to Laurel Creek	19.5 FW Miles	C;ORW	
1	Ecological/biological Integrity Benthos	Excellent Bioclassification	Aquatic Life	2006	
1	Ecological/biological Integrity FishCom	Excellent Bioclassification	Aquatic Life	2007	
⊙ 11-129-1-13	Laurel Creek	From source to Henry Fork	6.6 FW Miles	C	
1	Ecological/biological Integrity Benthos	Not Impaired Bioclassification	Aquatic Life	2005	
Catawba River Basin		Jacob Fork Watershed		0305010202	
⊙ 11-129-2-(4)	Jacob Fork	From Little River to Camp Creek	6.8 FW Miles	WS-III;ORW	
1	Ecological/biological Integrity Benthos	Excellent Bioclassification	Aquatic Life	2006	
1	Fecal Coliform (recreation)	No Criteria Exceeded	Recreation	2008	
1	Water Quality Standards Aquatic Life	No Criteria Exceeded	Aquatic Life	2008	
1	Water Quality Standards Water Supply	No Criteria Exceeded	Water Supply		
⊙ 11-129-2-(9.5)	Jacob Fork	From Camp Creek to a point 0.6 mile upstream of mouth	40.5 FW Miles	WS-III	
1	Ecological/biological Integrity Benthos	Good Bioclassification	Aquatic Life	2007	
⊙ 11-129-2-5	Little River	From source to Jacob Fork	5.2 FW Miles	WS-III;Tr,OR	
1	Ecological/biological Integrity Benthos	Excellent Bioclassification	Aquatic Life	2008	
1	Ecological/biological Integrity FishCom	Good Bioclassification	Aquatic Life	2007	
1	Water Quality Standards Aquatic Life	No Criteria Exceeded	Aquatic Life	2008	
Catawba River Basin		Clark Creek Watershed		0305010203	
⊙ 11-129-5-(0.3)b	Clark Creek (Shooks Lake)	From Miller Branch to 0.9 mile upstream of Walker Creek	16.6 FW Miles	C	
5	Ecological/biological Integrity Benthos	Fair Bioclassification	Aquatic Life	2000	1998
⊙ 11-129-5-7-2-(1)	Maiden Creek	From source to a point 0.7 mile upstream from backwaters of Maiden Reservoir	4.9 FW Miles	WS-II;HQW	
5	Ecological/biological Integrity Benthos	Fair Bioclassification	Aquatic Life	2002	2006
Catawba River Basin		Upper South Fork Catawba River Watershed		0305010204	
⊙ 11-129-1-(12.5)c	Henry Fork	From State Route 1143 to Jacob Fork	8.6 FW Miles	C	
1	Fecal Coliform (recreation)	No Criteria Exceeded	Recreation	2008	
4t	Turbidity	Standard Violation	Aquatic Life	2008	2008
⊙ 11-129-4	Howards Creek	From source to South Fork Catawba River	13.8 FW Miles	C	
1	Ecological/biological Integrity Benthos	Good-Fair Bioclassification	Aquatic Life	2008	
1	Ecological/biological Integrity FishCom	Good Bioclassification	Aquatic Life	2007	

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AU_Number	AU_Name	AU_Description	LengthArea	AU_Units	Classification
IR Cat	Parameter	Reason for Rating	Use Category	Collection Year	303(d)year
⊙ 11-129-3-(0.7)	Pott Creek	From a point 0.3 mile upstream of Lincoln County SR 1217 to South Catawba Fork River		3.2 FW Miles	WS-IV
1	Ecological/biological Integrity Benthos	Good Bioclassification	Aquatic Life	2006	
5	Ecological/biological Integrity FishCom	Fair Bioclassification	Aquatic Life	2006	2008
⊙ 11-129-(0.5)	South Fork Catawba River	From source to Catawba-Lincoln County Line		8.4 FW Miles	WS-V
3a	Fecal Coliform (recreation)	Potential Standards Violation	Recreation	2008	
5	Low pH	Standard Violation	Aquatic Life	2008	2008
5	Turbidity	Standard Violation	Aquatic Life	2008	2010
1	Water Quality Standards Water Supply	No Criteria Exceeded	Water Supply		
⊙ 11-129-4-1	Tanyard Creek	From source to Howards Creek		4.9 FW Miles	C
1	Ecological/biological Integrity Benthos	Good-Fair Bioclassification	Aquatic Life	2008	
Catawba River Basin		Middle South Fork Catawba River Watershed			0305010205
⊙ 11-129-9-(0.7)	Beaverdam Creek	From a point 0.3 mile upstream of Gaston County SR 1626 to South Fork Catawba River		8.3 FW Miles	WS-IV
1	Ecological/biological Integrity Benthos	Good Bioclassification	Aquatic Life	2006	
1	Ecological/biological Integrity FishCom	Excellent Bioclassification	Aquatic Life	2006	
⊙ 11-129-5-(9.5)	Clark Creek	From a point 0.9 mile upstream of Walker Creek to South Fork Catawba R.		1.8 FW Miles	WS-IV
5	Copper	Standard Violation	Aquatic Life	2006	2010
4s	Ecological/biological Integrity Benthos	Fair Bioclassification	Aquatic Life	2007	2006
4t	Fecal Coliform (recreation)	Standard Violation	Recreation	2008	2008
5	Turbidity	Standard Violation	Aquatic Life	2008	2008
1	Water Quality Standards Water Supply	No Criteria Exceeded	Water Supply	2008	
⊙ 11-129-8-(1)	Indian Creek	From source to a point 0.5 mile upstream of Mill Creek		14.8 FW Miles	WS-II;HQW
1	Ecological/biological Integrity Benthos	Good Bioclassification	Aquatic Life	2008	
⊙ 11-129-8-(1)	Indian Creek	From source to a point 0.5 mile upstream of Mill Creek		14.8 FW Miles	WS-II;HQW
1	Ecological/biological Integrity Benthos	Good Bioclassification	Aquatic Life	2008	

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AU_Number	AU_Name	AU_Description	LengthArea	AU_Units	Classification
IR Cat	Parameter	Reason for Rating	Use Category	Collection Year	303(d)year
⊙ 11-129-8-(3.5)	Indian Creek	From a point 0.5 mile upstream of Mill Creek to a point 0.4 mile upstream of mouth of Lick Fork (Town of Cherryville water supply intake)		0.5 FW Miles	WS-II;HQW,CA
1	Ecological/biological Integrity Benthos	Good Bioclassification	Aquatic Life	2008	
⊙ 11-129-8-(6.5)	Indian Creek	From a point 0.3 mile upstream of Lincoln County SR 1169 to South Fork Catawba River		6.0 FW Miles	WS-IV
1	Ecological/biological Integrity Benthos	Good-Fair Bioclassification	Aquatic Life	2008	
4s	Ecological/biological Integrity FishCom	Fair Bioclassification	Aquatic Life	2006	
3a	Fecal Coliform (recreation)	Potential Standards Violation	Recreation	2008	
5	Low pH	Standard Violation	Aquatic Life	2008	2010
5	Turbidity	Standard Violation	Aquatic Life	2008	2010
1	Water Quality Standards Water Supply	No Criteria Exceeded	Water Supply		
⊙ 11-129-8-7-(1)	Leonard Creek	From source to a point 0.2 mile downstream of Lincoln County SR 1180		5.4 FW Miles	C
1	Ecological/biological Integrity Benthos	Good Bioclassification	Aquatic Life	2008	
⊙ 11-129-8-6	Lick Fork	From source to Indian Creek		4.1 FW Miles	C
1	Ecological/biological Integrity Benthos	Good-Fair Bioclassification	Aquatic Life	2008	
⊙ 11-129-9-1-(2)	Little Beaverdam Creek	From a point 0.5 mile upstream of N.C. Hwy. 277 to Beaverdam Creek		3.4 FW Miles	WS-IV
1	Fecal Coliform (recreation)	No Criteria Exceeded	Recreation	2008	
5	Low pH	Standard Violation	Aquatic Life	2008	2010
1	Water Quality Standards Water Supply	No Criteria Exceeded	Water Supply	2008	
⊙ 11-129-8-3	Little Creek	From source to Indian Creek		4.2 FW Miles	WS-II;HQW
1	Ecological/biological Integrity Benthos	Good Bioclassification	Aquatic Life	2008	
⊙ 11-129-8-2	Little Indian Creek	From source to Indian Creek		6.3 FW Miles	WS-II;HQW
1	Ecological/biological Integrity Benthos	Good Bioclassification	Aquatic Life	2008	
⊙ 11-129-8-4-(1)	Mill Creek	From source to a point 0.5 mile upstream of mouth		4.6 FW Miles	WS-II;HQW
5	Ecological/biological Integrity Benthos	Fair Bioclassification	Aquatic Life	2008	2010
Catawba River Basin		Lower South Fork Catawba River Watershed		0305010206	
⊙ 11-129-16-7b	Dallas Branch	From Dallas WWTP to Long Creek		0.8 FW Miles	C
5	Ecological/biological Integrity Benthos	Fair Bioclassification	Aquatic Life	1992	1998

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AU_Number	AU_Name	AU_Description	LengthArea	AU_Units	Classification
IR Cat	Parameter	Reason for Rating	Use Category	Collection Year	303(d)year
⊙ 11-129-19	Duharts Creek	From source to South Fork Catawba River	6.6 FW Miles	WS-V	
3a	Fecal Coliform (recreation)	Potential Standards Violation	Recreation	2008	
1	Water Quality Standards Aquatic Life	No Criteria Exceeded	Aquatic Life	2008	
1	Water Quality Standards Water Supply	No Criteria Exceeded	Water Supply	2008	
⊙ 11-129-15-(1.5)	Hoyle Creek	From a point 0.5 mile upstream of Lincoln County SR 1321 to a point 0.2 mile downstream of Little Hoyle Creek	10.1 FW Miles	WS-IV	
3a	Fecal Coliform (recreation)	Potential Standards Violation	Recreation	2008	
1	Water Quality Standards Aquatic Life	No Criteria Exceeded	Aquatic Life	2008	
1	Water Quality Standards Water Supply	No Criteria Exceeded	Water Supply	2008	
⊙ 11-129-15-(6)	Hoyle Creek	From a point 0.2 mile downstream of Mauney Creek to South Fork Catawba River	0.5 FW Miles	WS-IV;CA	
1	Ecological/biological Integrity Benthos	Good Bioclassification	Aquatic Life	2006	
5	Ecological/biological Integrity FishCom	Fair Bioclassification	Aquatic Life	2006	2008
⊙ 11-129-16-2	Limekiln Creek	From source to Long Creek	1.9 FW Miles	WS-II;HQW	
1	Ecological/biological Integrity Benthos	Excellent Bioclassification	Aquatic Life	2001	
⊙ 11-129-15-3	Little Hoyle Creek	From source to Hoyle Creek	4.2 FW Miles	WS-IV	
3a	Fecal Coliform (recreation)	Potential Standards Violation	Recreation	2008	
1	Water Quality Standards Aquatic Life	No Criteria Exceeded	Aquatic Life	2008	
1	Water Quality Standards Water Supply	No Criteria Exceeded	Water Supply	2008	
⊙ 11-129-16-9	Little Long Creek	From source to Long Creek	10.0 FW Miles	C	
3a	Fecal Coliform (recreation)	Potential Standards Violation	Recreation	2008	
1	Water Quality Standards Aquatic Life	No Criteria Exceeded	Aquatic Life	2008	
⊙ 11-129-16-(4)	Long Creek	From Mountain Creek to South Fork Catawba River	15.3 FW Miles	C	
1	Ecological/biological Integrity Benthos	Good-Fair Bioclassification	Aquatic Life	2007	
1	Ecological/biological Integrity FishCom	Excellent Bioclassification	Aquatic Life	2001	
3a	Fecal Coliform (recreation)	Potential Standards Violation	Recreation	2008	
5	Low pH	Standard Violation	Aquatic Life	2008	2010
⊙ 11-129-15-5	Mauney Creek	From source to Hoyle Creek	4.4 FW Miles	WS-IV	
5	Ecological/biological Integrity Benthos	Poor Bioclassification	Aquatic Life	2006	2000

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AU_Number		AU_Name	AU_Description	LengthArea	AU_Units	Classification	
IR Cat	Parameter		Reason for Rating	Use Category	Collection Year	303(d)year	
⊙	11-129-(10.5)	South Fork Catawba River	From Town of High Shoals water supply intake to a point 0.6 mile upstream of N.C. Hwy. 275		8.1 FW Miles	WS-IV	
	3a	Fecal Coliform (recreation)	Potential Standards Violation	Recreation	2008		
	5	Turbidity	Standard Violation	Aquatic Life	2008	2010	
	1	Water Quality Standards Water Supply	No Criteria Exceeded	Water Supply	2008		
⊙	11-129-(14.5)	South Fork Catawba River	From a point 0.6 mile upstream of N.C. Hwy. 275 to a point 0.4 mile upstream of Long Creek (Towns of Dallas, Gastonia & Ranlo water supply intakes)		2.5 FW Miles	WS-IV;CA	
	1	Fecal Coliform (recreation)	No Criteria Exceeded	Recreation	2008		
	5	Turbidity	Standard Violation	Aquatic Life	2008	2010	
	1	Water Quality Standards Water Supply	No Criteria Exceeded	Water Supply	2008		
⊙	11-129-(15.5)	South Fork Catawba River	From a point 0.4 mile upstream of Long Creek to Cramerton Dam and Lake Wylie at Upper Armstrong Bridge		18.1 FW Miles	WS-V	
	3a	Fecal Coliform (recreation)	Potential Standards Violation	Recreation	2008		
	5	Low pH	Standard Violation	Aquatic Life	2008	2010	
	5	Turbidity	Standard Violation	Aquatic Life	2008	2008	
	1	Water Quality Standards Water Supply	No Criteria Exceeded	Water Supply			

APPENDIX 2-B

BIOLOGICAL (BENTHIC & FISH) SAMPLE SITE SHEETS

FISH COMMUNITY SAMPLE

Waterbody	Location	Date	Station ID	Bioclassification
HENRY FORK	SR 1922	05/23/07	CF18	Good

County	Subbasin	8 digit HUC	Latitude	Longitude	AU Number	Level IV Ecoregion
BURKE	35	03050102	35.66194444	-81.63611111	11-129-1-(2)	Eastern Blue Ridge Foothills

Stream Classification	Drainage Area (mi2)	Elevation (ft)	Stream Width (m)	Average Depth (m)	Reference Site
C;ORW	19.2	1300	11	0.3	Yes

Visible Landuse (%)	Forested/Wetland	Urban	Agriculture	Other (describe)
	90	5 (rural residential)	5	0

Upstream NPDES Dischargers (>1MGD or <1MGD and within 1 mile)	NPDES Number	Volume (MGD)
None	---	---

Water Quality Parameters

Temperature (°C)	15.6
Dissolved Oxygen (mg/L)	9.2
Specific Conductance (µS/cm)	26
pH (s.u.)	5.5

Water Clarity	Clear
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Habitat Assessment Scores (max)

Channel Modification (5)	5
Instream Habitat (20)	18
Bottom Substrate (15)	12
Pool Variety (10)	8
Riffle Habitat (16)	15
Left Bank Stability (7)	7
Right Bank Stability (7)	7
Light Penetration (10)	10
Left Riparian Score (5)	5
Right Riparian Score (5)	3
Total Habitat Score (100)	90

Site Photograph



Substrate	cobble, sand, bedrock
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Sample Date	Sample ID	Species Total	NCIBI	Bioclassification
05/23/07	2007-63	13	52	Good
09/28/98	98-72	12	52	Good

Most Abundant Species	Central Stoneroller	Exotic Species	Rock Bass and Smallmouth Bass
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Species Change Since Last Cycle	Gains -- Central Stoneroller, White Sucker, and Warpaint Shiner. Losses -- Sandbar Shiner and Creek Chub.
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Data Analysis

Watershed -- headwaters of the South Fork Catawba River; drains south-central Burke County below Morganton, including a portion of the South Mountain State Park lands. **Habitat** -- shallow runs with boulder eddies, riffles, chutes, and side snags; low flow; low conductivity; low morning pH from overnight respiration; densely forested riparian zones, with the exception of a hay field above the right bank. **2007** -- an abundant (n = 463) and fairly diverse community of fish including 4 intolerant species were collected, but with few darters; 84% of the sampled fish were minnows, about half of which were Central Stonerollers and Warpaint Shiners. **1998 - 2007** -- this site has maintained very stable NCIBI metrics over a 9 year period. Fifteen species of fish are known from this watershed including 7 species of minnows, 2 species of suckers, and 2 species of darters. This ORW catchment is showing no apparent water quality issues.

BENTHIC MACROINVERTEBRATE SAMPLE

Waterbody	Location	Station ID	Date	Bioclassification
HENRY FK	SR 1124	CB178	05/01/06	Good

County	Subbasin	8 digit HUC	Latitude	Longitude	AU Number	Level IV Ecoregion
CATAWBA	35	3050102	354103	812410	0	Northern Inner Piedmont

Stream Classification	Drainage Area (mi2)	Elevation (ft)	Stream Width (m)	Stream Depth (m)
C	81	970	20	0.75

Visible Landuse (%)	Forested/Wetland	Urban	Agriculture	Other (describe)
	75	25	0	0

Upstream NPDES Dischargers (>1MGD or <1MGD and within 1 mile)	NPDES Number	Volume (MGD)
None	---	---

Water Quality Parameters

Temperature (°C)	14.4
Dissolved Oxygen (mg/L)	9.8
Specific Conductance (µS/cm)	29
pH (s.u.)	6.7

Water Clarity	slightly turbid
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Habitat Assessment Scores (max)

Channel Modification (5)	5
Instream Habitat (20)	16
Bottom Substrate (15)	12
Pool Variety (10)	8
Riffle Habitat (16)	14
Left Bank Stability (7)	6
Right Bank Stability (7)	6
Light Penetration (10)	7
Left Riparian Score (5)	3
Right Riparian Score (5)	4
Total Habitat Score (100)	71

Site Photograph



Substrate Moderate amount of sand with some boulder, rubble and gravel

Sample Date	Sample ID	ST	EPT	BI	EPT BI	Bioclassification
05/01/06	9857	126	61	4.13	3.06	Good
08/22/02	8952	94	38	4.81	3.34	Good
08/18/97	7428	76	38	4.10	3.49	Good
08/22/92	6005	74	38	4.55	3.76	Good

Taxonomic Analysis

No major changes in the benthic community were observed. Abundant taxa included *Pseudocloeon propinquum*, *Epeorus rubidus*, *Heptagenia marginalis*, *Isonychia*, *Rhithrogena uhari*, *Maccaffertium modestum*, *Acroneuria abnormis*, *Perlesta*, *Cheumatopsyche*, *Dolophilodes*, *Micrasema wataga*, *Ceratopsyche sparna*, *Dubiraphia*, *Helichus*, *Boyeria vinosa*, *Progomphus obscurus*, *Corydalus cornutus*, *Ablabesmyia parajanta/janta*, *Conchapelopia*, *Parametriocnemus lundbecki*, *Tanytarsus*, *Simulium*, *Corbicula fluminea* and *Elimia*.

Data Analysis

This site is located south of the city of Hickory and the town of Icard. Since this location had been sampled in 2006, those data were used for this basinwide cycle. When corrected for seasonality, the 2006 sampled had an EPT richness of 43 and Biotic Index of 4.52 thereby placing it in the Good category. Henry Fork has consistently rated Good since 1992. Based on the benthic data no major changes in water quality have been observed.

BENTHIC MACROINVERTEBRATE SAMPLE

Waterbody	Location	Station ID	Date	Bioclassification
JACOB FK	SR 1924	CB192	05/02/06	Excellent

County	Subbasin	8 digit HUC	Latitude	Longitude	AU Number	Level IV Ecoregion
BURKE	35	3050102	353526	813402	0	Northern Inner Piedmont

Stream Classification	Drainage Area (mi2)	Elevation (ft)	Stream Width (m)	Stream Depth (m)
WS-III; Tr, ORW	25.4	1150	14	0.2

Visible Landuse (%)	Forested/Wetland	Urban	Agriculture	Other (describe)
	100	0	0	0

Upstream NPDES Dischargers (>1MGD or <1MGD and within 1 mile)	NPDES Number	Volume (MGD)
None	---	---

Water Quality Parameters

Temperature (°C)	16.6
Dissolved Oxygen (mg/L)	9.8
Specific Conductance (µS/cm)	21
pH (s.u.)	6.8
Water Clarity	clear

Site Photograph



Habitat Assessment Scores (max)

Channel Modification (5)	5
Instream Habitat (20)	13
Bottom Substrate (15)	11
Pool Variety (10)	8
Riffle Habitat (16)	14
Left Bank Stability (7)	6
Right Bank Stability (7)	6
Light Penetration (10)	10
Left Riparian Score (5)	5
Right Riparian Score (5)	3
Total Habitat Score (100)	81

Substrate Mostly rubble and gravel with some sand and silt

Sample Date	Sample ID	ST	EPT	BI	EPT BI	Bioclassification
05/02/06	9862	136	60	3.92	2.37	Excellent
08/22/02	8953	---	35	---	3.31	Good
08/18/97	7427	100	47	4.26	3.51	Excellent
08/20/92	6006	106	48	4.36	3.22	Good

Taxonomic Analysis

With the exception of 2002, no major changes in the benthic community were observed. In 2002, mayfly taxa richness decreased from previous years but had recovered in 2006. Abundant EPT taxa included *Drunella cornutella*, *Epeorus rubidus*, *Isonychia*, *Leucrocota*, *Rhithrogena uhari*, *Maccaffertium modestum*, *Stenacron pallidum*, *Acroneuria abnormis*, *Isoperla holochlora*, *Perlesta*, *Dolophiloides*, *Glossosoma*, *Lepidostoma*, *Neophylax oligius*, *Rhyacophila fuscula*, *R. nigrata* and *Ceratopsyche sparna*.

Data Analysis

This site is located downstream of South Mountains State Park and was designated ORW in 1989. With the exception of 2002, a dry year, the water quality appears to be stable. Although the site received a Good rating in 1992, EPT taxa richness and EPT Biotic Index scores are consistent with values recorded in 1997 and 2006 when the site received Excellent ratings suggesting the site was borderline Good/Excellent.

FISH COMMUNITY SAMPLE

Waterbody	Location	Date	Station ID	Bioclassification
POTT CR	SR 1217	05/31/06	CF48	Fair

County	Subbasin	8 digit HUC	Latitude	Longitude	AU Number	Level IV Ecoregion
LINCOLN	35	03050102	35.55166667	-81.31916667	11-129-3-(0.7)	Northern Inner Piedmont

Stream Classification	Drainage Area (mi2)	Elevation (ft)	Stream Width (m)	Average Depth (m)	Reference Site
WS-IV	21	840	9	0.4	No

Visible Landuse (%)	Forested/Wetland	Urban	Agriculture	Other (describe)
	70	10 (rural residential)	20	0

Upstream NPDES Dischargers (>1MGD or <1MGD and within 1 mile)	NPDES Number	Volume (MGD)
None	---	---

Water Quality Parameters

Temperature (°C)	24.6
Dissolved Oxygen (mg/L)	7.1
Specific Conductance (µS/cm)	61
pH (s.u.)	6.1

Water Clarity	Slightly turbid
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Site Photograph



Habitat Assessment Scores (max)

Channel Modification (5)	5
Instream Habitat (20)	13
Bottom Substrate (15)	3
Pool Variety (10)	9
Riffle Habitat (16)	2
Left Bank Stability (7)	3
Right Bank Stability (7)	3
Light Penetration (10)	7
Left Riparian Score (5)	5
Right Riparian Score (5)	5
Total Habitat Score (100)	55

Substrate	Sand
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Sample Date	Sample ID	Species Total	NCIBI	Bioclassification
05/31/06	2006-69	13	40	Fair
05/21/02	2002-50	20	50	Good
05/21/97	97-49	15	50	Good

Most Abundant Species	Bluehead Chub and Bluegill	Exotic Species	Fathead Minnow
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Species Change Since Last Cycle	Gains -- Fathead Minnow and Eastern Mosquitofish. Losses -- Greenfin Shiner, Santee Chub, Greenhead Shiner, Creek Chub, Notchlip Redhorse, Flat Bullhead, Pumpkinseed, and Largemouth Bass.
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Data Analysis

Watershed -- tributary to the South Fork Catawba River; drains southern Catawba and northern Lincoln counties; no municipalities in the watershed; two small permitted dischargers within the watershed (combined flow = 0.045 MGD). **Habitat** -- seemed to be more severely eroded in 2006 than in 2002 as a result of 2004 hurricane flows; eroding banks; only snag and log riffles and one gravel riffle. **2006** -- 18 of 20 species collected in 2002 declined in number (e.g. Rosyside Dace, Bluehead Chub, Sandbar Shiner, and White Sucker) or were not collected in 2006 (Creek Chub); number of fish decreased from 265 to 73, the fewest ever collected at the site and the fewest of any site in the basin 2004 - 2007; only one-third of the species were represented by multiple age groups; sampled as part of a Catawba River Basin Biological TMDL Study (Biological Assessment Unit Memorandum F-20061207). **1997 - 2006** -- conductivity has ranged from 47 to 61 µS/cm; 22 species are known from the site, including the intolerant Santee Chub, Highback Chub, and Seagreen Darter; no exotic species known from the site until 2006; community affected by flow extremes and by limited avenues for recolonization.

BENTHIC MACROINVERTEBRATE SAMPLE

Waterbody	Location	Station ID	Date	Bioclassification
HOWARDS CR	SR 1200	CB185	05/03/06	Good

County	Subbasin	8 digit HUC	Latitude	Longitude	AU Number	Level IV Ecoregion
LINCOLN	35	3050102	352954	812026	0	Southern Outer Piedmont

Stream Classification	Drainage Area (mi2)	Elevation (ft)	Stream Width (m)	Stream Depth (m)
C	17	800	712	0.5

Visible Landuse (%)	Forested/Wetland	Urban	Agriculture	Other (describe)
	50	0	25	25

Upstream NPDES Dischargers (>1MGD or <1MGD and within 1 mile)	NPDES Number	Volume (MGD)
None	---	---

Water Quality Parameters

Temperature (°C)	15.7
Dissolved Oxygen (mg/L)	9.8
Specific Conductance (µS/cm)	48
pH (s.u.)	7.2
Water Clarity	turbid

Site Photograph



Habitat Assessment Scores (max)

Channel Modification (5)	5
Instream Habitat (20)	7
Bottom Substrate (15)	4
Pool Variety (10)	6
Riffle Habitat (16)	3
Left Bank Stability (7)	6
Right Bank Stability (7)	6
Light Penetration (10)	7
Left Riparian Score (5)	2
Right Riparian Score (5)	5
Total Habitat Score (100)	51

Substrate	Mostly sand with a moderate amount of gravel
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Sample Date	Sample ID	ST	EPT	BI	EPT BI	Bioclassification
05/03/06	9864	121	40	5.63	4.64	Good
08/21/02	8947	---	17	---	4.58	Good-Fair
08/19/97	7431	---	25	---	4.16	Good
08/17/92	5977	---	25	---	4.07	Good

Taxonomic Analysis

When corrected for season, EPT taxa richness increased in 2006 from previous samples. Several EPT taxa either Common or Rare in 2006 were not previously collected from this site: *Plauditus dubius* group, *P. cestus*, *Habrophlebioides*, *Procloeon*, *Ironoquia punctatissima*, *Lepidostoma* and *Rhyacophila fuscula*. Other Abundant EPT taxa at this site were: *Baetis pluto*, *Pseudocloeon propinquum*, *Isonychia*, *Stenacron interpunctatum*, *Perlesta*, *Cheumatopsyche* and *Triaenodes ignitus*.

Data Analysis

Howards Creek drains the northwestern portion of Lincoln County. Since this location had been sampled in 2006, those data corrected for season were used for the 2007 basinwide cycle. The water quality at this site appears to be fairly stable with Good bioclassifications in 1992, 1997, and 2006. During the drought of 2002, the bioclassification dropped to Good-Fair with only 17 EPT taxa collected.

FISH COMMUNITY SAMPLE

Waterbody	Location	Date	Station ID	Bioclassification
HOWARDS CR	SR 1185	04/24/07	CF61	Good

County	Subbasin	8 digit HUC	Latitude	Longitude	AU Number	Level IV Ecoregion
LINCOLN	35	03050102	35.496116	-81.319681	11-129-4	Southern Outer Piedmont

Stream Classification	Drainage Area (mi2)	Elevation (ft)	Stream Width (m)	Average Depth (m)	Reference Site
C	17.1	790	11	0.4	No

Visible Landuse (%)	Forested/Wetland	Urban	Agriculture	Other (describe)
	35	0	65	0

Upstream NPDES Dischargers (>1MGD or <1MGD and within 1 mile)	NPDES Number	Volume (MGD)
None	---	---

Water Quality Parameters

Temperature (°C)	17.5
Dissolved Oxygen (mg/L)	8.7
Specific Conductance (µS/cm)	54
pH (s.u.)	6.8

Water Clarity	Clear
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Site Photograph



Habitat Assessment Scores (max)

Channel Modification (5)	4
Instream Habitat (20)	14
Bottom Substrate (15)	4
Pool Variety (10)	6
Riffle Habitat (16)	7
Left Bank Stability (7)	4
Right Bank Stability (7)	4
Light Penetration (10)	8
Left Riparian Score (5)	0
Right Riparian Score (5)	1
Total Habitat Score (100)	52

Substrate	Soft sand and gravel
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Sample Date	Sample ID	Species Total	NCIBI	Bioclassification
04/24/07	2007-28	20	48	Good

Most Abundant Species	Bluehead Chub	Exotic Species	Green Sunfish and Redear Sunfish
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Species Change Since Last Cycle	N/A
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Data Analysis

This is the first fish community sample collected at this site. **Watershed** -- tributary to the South Fork Catawba River; drains northwest Lincoln County and the extreme southwestern portion of Catawba County; no municipalities in the watershed. **Habitat** -- sandy/gravelly runs; snags; cattle with access to the stream on the left; poor riparian zones, widths were only one-tree wide. **2007** -- conductivity was relatively low; a very diverse community for a stream of its size, including 6 species of sunfish and 3 species of darters, but the percentage of tolerant fish (Creek Chub, White Sucker, Flat Bullhead, Eastern Mosquitofish, Redbreast Sunfish, and Green Sunfish) and the trophic metrics (elevated percentage of omnivores) were indicative of some slight nutrient enrichment; two intolerant species were present, Seagreen Darter and Piedmont Darter.

FISH COMMUNITY SAMPLE

Waterbody	Location	Date	Station ID	Bioclassification
CLARK CR	SR 2012	07/14/04	CF7	Poor

County	Subbasin	8 digit HUC	Latitude	Longitude	AU Number	Level IV Ecoregion
CATAWBA	35	03050102	35.60861111	-81.23083333	11-129-5-(0.3)b	Northern Inner Piedmont

Stream Classification	Drainage Area (mi2)	Elevation (ft)	Stream Width (m)	Average Depth (m)	Reference Site
C	30.8	840	7	0.3	No

Visible Landuse (%)	Forested/Wetland	Urban	Agriculture	Other (describe)
	20	0	80	0

Upstream NPDES Dischargers (>1MGD or <1MGD and within 1 mile)	NPDES Number	Volume (MGD)
City of Newton's Clark Creek WWTP (~1.5 miles upstream)	NC0036196	7.5

Water Quality Parameters

Temperature (°C)	23.1
Dissolved Oxygen (mg/L)	7.1
Specific Conductance (µS/cm)	221
pH (s.u.)	6.6

Water Clarity	Slightly turbid
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Site Photograph



Habitat Assessment Scores (max)

Channel Modification (5)	5
Instream Habitat (20)	14
Bottom Substrate (15)	3
Pool Variety (10)	6
Riffle Habitat (16)	1
Left Bank Stability (7)	2
Right Bank Stability (7)	2
Light Penetration (10)	9
Left Riparian Score (5)	2
Right Riparian Score (5)	2
Total Habitat Score (100)	47

Substrate	Sand
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Sample Date	Sample ID	Species Total	NCIBI	Bioclassification
07/14/04	2004-119	9	34	Poor

Most Abundant Species	Redbreast Sunfish	Exotic Species	None
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Species Change Since Last Cycle	N/A
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Data Analysis

This is the first fish community sample collected at this site. **Watershed** -- tributary to the South Fork Catawba River; drains portions of the cities of Hickory, Conover, and Newton in central Catawba County; sand dipping operations downstream from the bridge. **Habitat** -- very shallow sandy runs; stick riffles; side deadfalls, snags, roots, and undercuts; cattle with access to stream; cattle exclusion barrier across the channel; urban debris in the stream. **2004** -- conductivity elevated; low diversity and very low fish abundance (n = 75) for a stream of its size; intolerant species were absent; only one species of sucker and darter were collected; percentage of tolerant fish (White Sucker, Flat Bullhead, and Redbreast Sunfish) was high; data were also used as part of a NCSU Urban Fish Study.

BENTHIC MACROINVERTEBRATE SAMPLE

Waterbody	Location	Station ID	Date	Bioclassification
CLARK CR	SR 1008	CB165	07/09/07	Fair

County	Subbasin	8 digit HUC	Latitude	Longitude	AU Number	Level IV Ecoregion
LINCOLN	35	3050102	352830	811603	0	Southern Outer Piedmont

Stream Classification	Drainage Area (mi2)	Elevation (ft)	Stream Width (m)	Stream Depth (m)
WS-IV	91	775	20	0.3

Visible Landuse (%)	Forested/Wetland	Urban	Agriculture	Other (describe)
	70	30	0	0

Upstream NPDES Dischargers (>1MGD or <1MGD and within 1 mile)	NPDES Number	Volume (MGD)
Clark Creek WWTP	NC0036196	7.5
Delta Apparel/Maiden	NC0006190	1.0
Maiden WWTP	NC0039594	1.0

Water Quality Parameters

Temperature (°C)	24.4
Dissolved Oxygen (mg/L)	0
Specific Conductance (µS/cm)	586
pH (s.u.)	7.4
Water Clarity	clear

Site Photograph



Substrate Mix of boulder, rubble, gravel and sand with a fair amount of silt

Habitat Assessment Scores (max)

Channel Modification (5)	5
Instream Habitat (20)	15
Bottom Substrate (15)	8
Pool Variety (10)	10
Riffle Habitat (16)	14
Left Bank Stability (7)	3
Right Bank Stability (7)	3
Light Penetration (10)	10
Left Riparian Score (5)	3
Right Riparian Score (5)	3
Total Habitat Score (100)	74

Sample Date	Sample ID	ST	EPT	BI	EPT BI	Bioclassification
07/09/07	10234	49	12	6.21	5.87	Fair
08/21/02	8948	47	9	6.20	5.19	Fair
08/19/97	7432	48	16	5.98	5.50	Good-Fair
08/05/92	5968	48	10	6.42	5.39	Fair

Taxonomic Analysis

The mayfly taxa richness had significantly decreased from eight taxa in 1997 to two taxa in 2002. In 2007, the mayfly taxa richness increased to four, possibly showing some signs of recovery from the drought. The decrease in the number of mayfly taxa may have been due to drought effects alone or a combination of drought effects and effluent from three dischargers located upstream of this site. Absent in 2002 were the tolerant caddisfly *Hydropsyche venularis* and the ubiquitous and tolerant mayfly *Maccaffertium modestum*, which had been Common or Abundant in previous samples. Both taxa were present in 2007. *Maccaffertium modestum* were Abundant and *Hydropsyche venularis* were Common.

Data Analysis

This site is located downstream of three dischargers, two WWTPs and a textile mill. In 1997 and 2002, it was noted that the water in Clark Creek was red, possibly from dyes used in the textile mill. However, the water was clear in 2007. The Biotic Index and the EPT Biotic Index indicate that water quality has remained fairly constant for the previous 15 years. The Good-Fair rating in 1997 was borderline Fair/Good-Fair.

BENTHIC MACROINVERTEBRATE SAMPLE

Waterbody	Location	Station ID	Date	Bioclassification
INDIAN CR	SR 1252	CB188	05/03/06	Good

County	Subbasin	8 digit HUC	Latitude	Longitude	AU Number	Level IV Ecoregion
LINCOLN	35	3050102	352522	811533	0	Southern Outer Piedmont

Stream Classification	Drainage Area (mi2)	Elevation (ft)	Stream Width (m)	Stream Depth (m)
C	69.7	780	15	0.3

Visible Landuse (%)	Forested/Wetland	Urban	Agriculture	Other (describe)
	50	25	25	0

Upstream NPDES Dischargers (>1MGD or <1MGD and within 1 mile)	NPDES Number	Volume (MGD)
None	---	---

Water Quality Parameters

Temperature (°C)	17.5
Dissolved Oxygen (mg/L)	8.9
Specific Conductance (µS/cm)	42
pH (s.u.)	7.1

Water Clarity	turbid
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Habitat Assessment Scores (max)

Channel Modification (5)	5
Instream Habitat (20)	12
Bottom Substrate (15)	4
Pool Variety (10)	0
Riffle Habitat (16)	5
Left Bank Stability (7)	6
Right Bank Stability (7)	6
Light Penetration (10)	7
Left Riparian Score (5)	5
Right Riparian Score (5)	3
Total Habitat Score (100)	53

Site Photograph



Substrate	Mostly sand and hardpacked clay with some gravel
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Sample Date	Sample ID	ST	EPT	BI	EPT BI	Bioclassification
05/03/06	9866	81	26	5.52	4.86	Good
08/21/02	8946	---	13	---	4.81	Not Rated
08/19/97	7433	73	24	5.38	4.93	Good
08/17/92	5978	79	29	5.78	5.18	Good

Taxonomic Analysis

Taxa observed in the 2006 sample indicated an increase in mayfly and caddisfly taxa which had decreased significantly in 2002 due to drought conditions. Abundant EPT taxa included *Baetis intercalaris*, *Pseudocloeon propinquum*, *Hexagenia*, *Maccaffertium modestum*, *Perlesta*, *Oecetis persimilis* and *Trienodes ignitus*.

Data Analysis

The Indian Creek watershed includes western Lincoln County and the extreme northwestern corner of Gaston County. In 2002, the site was moved 1.5 miles upstream due to low flows at SR 1252. However, 2002 was a dry year and BAU staff decided not to rate this site in 2002. With the exception of 2002, water quality has remained stable and Indian Creek has consistently rated Good.

FISH COMMUNITY SAMPLE

Waterbody	Location	Date	Station ID	Bioclassification
INDIAN CR	SR 1252	06/01/06	CF21	Fair

County	Subbasin	8 digit HUC	Latitude	Longitude	AU Number	Level IV Ecoregion
LINCOLN	35	03050102	35.42277778	-81.25916667	11-129-8-(6.5)	Southern Outer Piedmont

Stream Classification	Drainage Area (mi2)	Elevation (ft)	Stream Width (m)	Average Depth (m)	Reference Site
WS-IV	69.2	760	13	0.5	No

Visible Landuse (%)	Forested/Wetland	Urban	Agriculture	Other (describe)
	75	25 (rural residential)	0	0

Upstream NPDES Dischargers (>1MGD or <1MGD and within 1 mile)	NPDES Number	Volume (MGD)
City of Cherryville's Cherryville WWTP	NC0044440	2

Water Quality Parameters

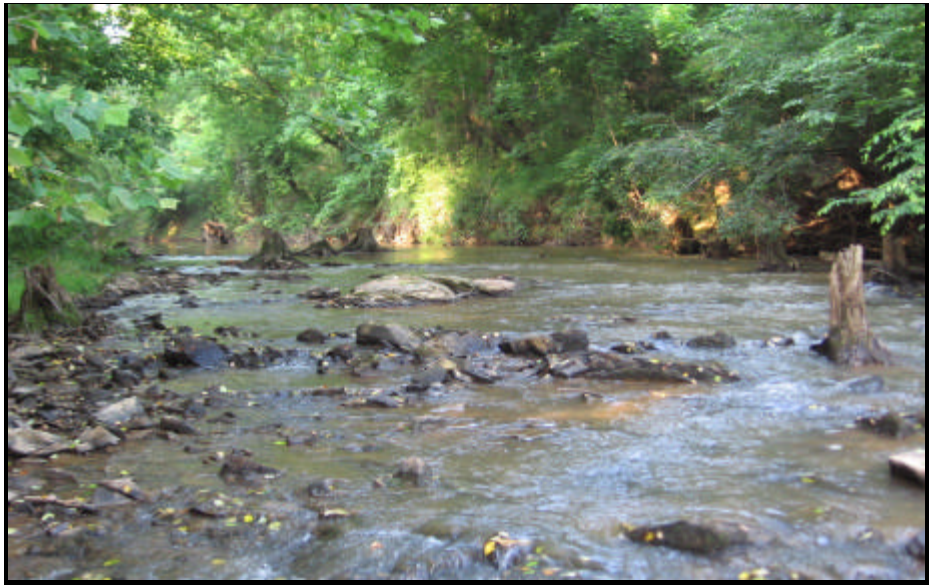
Temperature (°C)	20.7
Dissolved Oxygen (mg/L)	7.4
Specific Conductance (µS/cm)	76
pH (s.u.)	6.0

Water Clarity	Turbid
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Habitat Assessment Scores (max)

Channel Modification (5)	5
Instream Habitat (20)	16
Bottom Substrate (15)	3
Pool Variety (10)	9
Riffle Habitat (16)	10
Left Bank Stability (7)	6
Right Bank Stability (7)	4
Light Penetration (10)	9
Left Riparian Score (5)	5
Right Riparian Score (5)	5
Total Habitat Score (100)	72

Site Photograph



Substrate	Sand, gravel, cobble, and boulder
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Sample Date	Sample ID	Species Total	NCIBI	Bioclassification
06/01/06	2006-70	14	38	Fair
05/21/02	2002-51	11	38	Fair
07/01/97	97-67	11	38	Fair

Most Abundant Species	Bluehead Chub and Green Sunfish	Exotic Species	Green Sunfish
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Species Change Since Last Cycle	Gains -- Margined Madtom and Eastern Mosquitofish. Losses -- None.
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Data Analysis

Watershed -- tributary to the South Fork Catawba River; historically impounded by the Laboratory Mill Dam; watershed includes western Lincoln County and the extreme northwestern corner of Gaston County encompassing the north side of the Town of Cherryville; site is ~ 1.1 miles upstream from the creek's confluence with the river. **Habitat** -- Carolina Slate Belt type stream; outcrops; riffles with *Podostemum*. **2006** -- total number of fish declined from 207 to 111 between 2002 and 2006; darters and intolerant species absent; sampled as part of a Catawba River Basin Biological TMDL Study (Biological Assessment Unit Memorandum F-20061207). **1997 - 2006** -- conductivity has ranged from 75 to 86 µS/cm; very low diversity for a stream of its size; only 15 species are known from the site, but no darters or intolerant species have ever been collected; percentage of tolerant fish (Creek Chub, White Sucker, Flat Bullhead, Eastern Mosquitofish, Redbreast Sunfish, and Green Sunfish) has increased from 16% to 29% to 49% since 1997; community affected by extremes in flows and by limited avenues for recolonization.

FISH COMMUNITY SAMPLE

Waterbody	Location	Date	Station ID	Bioclassification
BEAVERDAM CR	SR 1609	05/31/06	CF2	Excellent

County	Subbasin	8 digit HUC	Latitude	Longitude	AU Number	Level IV Ecoregion
GASTON	35	03050102	35.40444444	-81.24583333	11-129-9-(0.7)	Southern Outer Piedmont

Stream Classification	Drainage Area (mi2)	Elevation (ft)	Stream Width (m)	Average Depth (m)	Reference Site
WS-IV	23	750	10	0.5	No

Visible Landuse (%)	Forested/Wetland	Urban	Agriculture	Other (describe)
	100	0	0	0

Upstream NPDES Dischargers (>1MGD or <1MGD and within 1 mile)	NPDES Number	Volume (MGD)
None	---	---

Water Quality Parameters

Temperature (°C)	19.8
Dissolved Oxygen (mg/L)	7.8
Specific Conductance (µS/cm)	75
pH (s.u.)	6.2

Water Clarity	Turbid
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Habitat Assessment Scores (max)

Channel Modification (5)	5
Instream Habitat (20)	16
Bottom Substrate (15)	3
Pool Variety (10)	9
Riffle Habitat (16)	7
Left Bank Stability (7)	7
Right Bank Stability (7)	7
Light Penetration (10)	8
Left Riparian Score (5)	5
Right Riparian Score (5)	5
Total Habitat Score (100)	72

Site Photograph



Substrate	Bedrock, sand, and gravel
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Sample Date	Sample ID	Species Total	NCIBI	Bioclassification
05/31/06	2006-68	18	54	Excellent
05/21/02	2002-52	13	50	Good

Most Abundant Species	Redbreast Sunfish	Exotic Species	Green Sunfish
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Species Change Since Last Cycle	Gains -- Whitefin Shiner, Golden Shiner, Spottail Shiner, Green Sunfish, Pumpkinseed, Warmouth, and Piedmont Darter. Losses -- Rosyside Dace and Highback Chub.
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Data Analysis

Watershed -- tributary to the South Fork Catawba River; drains the northwestern portion of Gaston County, including the eastern and southeastern portion of the Town of Cherryville; site is ~ 1.3 miles above the creek's confluence with the river. **Habitat** -- good pools; bedrock outcrops; riffle at end of reach; forested riparian zones. **2006** -- total number of fish decreased, but the diversity was greater in 2006 than in 2002; 10 of 13 species collected in 2002 declined in number or were not collected in 2006; large suckers abundant and continued to use the creek as a spawning and nursery tributary; sampled as part of a Catawba River Basin Biological TMDL Study (Biological Assessment Unit Memorandum F-20061207). **2002 & 2006** -- 20 species known from the site, including the intolerant Highback Chub, Seagreen Darter, and Piedmont Darter.

FISH COMMUNITY SAMPLE

Waterbody	Location	Date	Station ID	Bioclassification
HOYLE CR	SR 1836	05/31/06	CF19	Fair

County	Subbasin	8 digit HUC	Latitude	Longitude	AU Number	Level IV Ecoregion
GASTON	35	03050102	35.335	-81.13361111	11-129-15-(6)	Southern Outer Piedmont

Stream Classification	Drainage Area (mi2)	Elevation (ft)	Stream Width (m)	Average Depth (m)	Reference Site
WS-IV	27.5	695	7	0.3	No

Visible Landuse (%)	Forested/Wetland	Urban	Agriculture	Other (describe)
	55	10 (rural residential)	35	0

Upstream NPDES Dischargers (>1MGD or <1MGD and within 1 mile)	NPDES Number	Volume (MGD)
None	---	---

Water Quality Parameters

Temperature (°C)	19.0
Dissolved Oxygen (mg/L)	8.3
Specific Conductance (µS/cm)	84
pH (s.u.)	6.0

Water Clarity	Turbid
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Site Photograph



Habitat Assessment Scores (max)

Channel Modification (5)	5
Instream Habitat (20)	12
Bottom Substrate (15)	3
Pool Variety (10)	8
Riffle Habitat (16)	1
Left Bank Stability (7)	3
Right Bank Stability (7)	3
Light Penetration (10)	9
Left Riparian Score (5)	3
Right Riparian Score (5)	3
Total Habitat Score (100)	50

Substrate	Sand and gravel
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Sample Date	Sample ID	Species Total	NCIBI	Bioclassification
05/31/06	2006-67	15	40	Fair
05/22/02	2002-53	15	42	Good-Fair
06/12/97	97-59	14	48	Good

Most Abundant Species	Spottail Shiner	Exotic Species	Green Sunfish
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Species Change Since Last Cycle	Gains -- Pumpkinseed and Warmouth. Losses -- Highback Chub, Greenhead Shiner, Flat Bullhead, Fantail Darter, and Piedmont Darter.
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Data Analysis

Watershed -- tributary to the South Fork Catawba River; drains south central Lincoln County and north central Gaston County, west of the Town of Stanley; two small permitted dischargers within the watershed (combined flow = 0.5 MGD); site is ~ 0.4 miles above the creek's confluence with the river. **Habitat** -- sandy, shallow runs; undercuts; stick riffles; entrenched with easily eroded banks, especially the left bank. **2006** -- number of fish declined from 600 in 2002 (a low flow year) to 218 in 2006; 11 of 15 species collected in 2002 declined in number (e.g. Bluehead Chub and Sandbar Shiner) or were not collected in 2006 (Greenhead Shiner); due to proximity to the river, the number of species of sunfish increased from 1 in 2002 to 6 in 2006; intolerant species absent; sampled as part of a Catawba River Basin Biological TMDL Study (Biological Assessment Unit Memorandum F-20061207). **1997 - 2006** -- conductivity has ranged from 68 to 88 µS/cm; 23 species are known from the site; community affected by extremes in flows and by limited avenues for recolonization.

FISH COMMUNITY SAMPLE

Waterbody	Location	Date	Station ID	Bioclassification
LONG CR	SR 1456	07/15/04	CF29	Excellent

County	Subbasin	8 digit HUC	Latitude	Longitude	AU Number	Level IV Ecoregion
GASTON	36	03050102	35.30527778	-81.23277778	11-129-16-(4)	Southern Outer Piedmont

Stream Classification	Drainage Area (mi2)	Elevation (ft)	Stream Width (m)	Average Depth (m)	Reference Site
C	31.1	695	7	0.4	No

Visible Landuse (%)	Forested/Wetland	Urban	Agriculture	Other (describe)
	75	5 (developed)	0	20 (church lawn)

Upstream NPDES Dischargers (>1MGD or <1MGD and within 1 mile)	NPDES Number	Volume (MGD)
None	---	---

Water Quality Parameters

Temperature (°C)	22.5
Dissolved Oxygen (mg/L)	6.9
Specific Conductance (µS/cm)	115
pH (s.u.)	6.3

Water Clarity	Slightly turbid
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Habitat Assessment Scores (max)

Channel Modification (5)	5
Instream Habitat (20)	12
Bottom Substrate (15)	3
Pool Variety (10)	7
Riffle Habitat (16)	3
Left Bank Stability (7)	3
Right Bank Stability (7)	3
Light Penetration (10)	10
Left Riparian Score (5)	4
Right Riparian Score (5)	5
Total Habitat Score (100)	55

Site Photograph



Substrate	Sand
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Sample Date	Sample ID	Species Total	NCIBI	Bioclassification
07/15/04	2004-122	17	54	Excellent

Most Abundant Species	Redbreast Sunfish	Exotic Species	Redear Sunfish
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Species Change Since Last Cycle	N/A
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Data Analysis

This is the first fish community sample collected at this site. **Watershed** -- tributary to the South Fork Catawba River; drains central Gaston County, including portions of the municipal areas of Kings Mountain, Bessemer City, and Gastonia; site is ~ 3.4 miles above the basinwide site monitored in 1993, 1997, and 2002. **Habitat** -- sandy runs; snags; undercuts; deadfalls; good canopy; below a natural bedrock shelves/waterfall. **2004** -- community was diverse and abundant; percentage of tolerant fish (White Sucker, Flat Bullhead, Eastern Mosquitofish, and Redbreast Sunfish) slightly elevated; percentage of species with multiple age groups slightly lower than expected; intolerant species included Highback Chub and Seagreen Darter; data were also used as part of a NCSU Urban Fish Study.

BENTHIC MACROINVERTEBRATE SAMPLE

Waterbody	Location	Station ID	Date	Bioclassification
LONG CR	SR 1456	CB224	07/10/07	Good-Fair

County	Subbasin	8 digit HUC	Latitude	Longitude	AU Number	Level IV Ecoregion
GASTON	36	3050102	351820	811356	0	Southern Outer Piedmont

Stream Classification	Drainage Area (mi2)	Elevation (ft)	Stream Width (m)	Stream Depth (m)
C	31.1	700	13	0.3

Visible Landuse (%)	Forested/Wetland	Urban	Agriculture	Other (describe)
	70	0	30	0

Upstream NPDES Dischargers (>1MGD or <1MGD and within 1 mile)	NPDES Number	Volume (MGD)
None	---	---

Water Quality Parameters

Temperature (°C)	23.3
Dissolved Oxygen (mg/L)	0
Specific Conductance (µS/cm)	135
pH (s.u.)	6.9

Water Clarity	slightly turbid
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Site Photograph



Habitat Assessment Scores (max)

Channel Modification (5)	5
Instream Habitat (20)	16
Bottom Substrate (15)	8
Pool Variety (10)	10
Riffle Habitat (16)	3
Left Bank Stability (7)	6
Right Bank Stability (7)	6
Light Penetration (10)	10
Left Riparian Score (5)	4
Right Riparian Score (5)	3
Total Habitat Score (100)	71

Substrate	Mostly sand with some gravel and silt
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Sample Date	Sample ID	ST	EPT	BI	EPT BI	Bioclassification
07/10/07	10235	74	23	6.13	5.51	Good-Fair
08/20/97	7437	62	21	5.95	5.10	Good-Fair
07/25/90	5395	67	18	6.18	5.22	Good-Fair

Taxonomic Analysis

No major changes in the benthic community were observed. Abundant taxa included *Baetis flavistriga*, *B. intercalaris*, *Isonychia*, *Maccaffertium modestum*, *Cheumatopsyche*, *Hydropsyche betteni*, *Triaenodes ignitus*, *Ancyronyx variegatus*, *Dineutus*, *Macronychus glabrus*, *Boyeria vinosa*, *Ophiogomphus*, *Progomphus obscurus*, *Tribelos fuscicornis* and *Corbicula fluminea*.

Data Analysis

Long Creek drains the western portion of Gaston County. This particular location is also an ambient monitoring site. It was not sampled for benthos in 2002 due to low flows. Although EPT taxa richness has gradually increased since 1990, the bioclassification has remained at Good-Fair.

APPENDIX 2-C

AMBIENT STATION SUMMARY SHEETS

Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

Location: HENRY FORK RIV AT SR 1124 NR HENRY RIVER

Station #: C4300000

Hydrologic Unit Code: 03050102

Latitude: 35.68483

Longitude: -81.40346

Stream class: C

Agency: NCAMBNT

NC stream index: 11-129-1-(12.5)

Time period: 01/13/2004 to 12/11/2008

	# results	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
Field													
D.O. (mg/L)	59	0	<4	0	0		5.8	7.3	8.2	9.5	11.1	12.4	13.7
	59	0	<5	0	0		5.8	7.3	8.2	9.5	11.1	12.4	13.7
pH (SU)	59	0	<6	15	25.4	100	5.1	5.6	5.9	6.4	6.7	7.1	7.8
	59	0	>9	0	0		5.1	5.6	5.9	6.4	6.7	7.1	7.8
Spec. conductance (umhos/cm at 25°C)	58	0	N/A				26	27	28	31	33	34	94
Water Temperature (°C)	59	0	>32	0	0		1.3	4.4	8.3	15.1	20.6	25.2	25.9
Other													
TSS (mg/L)	20	7	N/A				2.5	2.5	3.2	6.2	9.6	62.9	101
Turbidity (NTU)	59	0	>50	6	10.2	62.3	1.4	1.9	2.9	5	11	55	150
Metals (ug/L)													
Aluminum, total (Al)	13	0	N/A				62	75	140	220	620	4020	5300
Arsenic, total (As)	13	13	>10	0	0		5	5	5	5	8	10	10
Cadmium, total (Cd)	13	13	>2	0	0		1	1.4	2	2	2	2	2
Chromium, total (Cr)	13	13	>50	0	0		10	16	25	25	25	25	25
Copper, total (Cu)	13	11	>7	0	0		2	2	2	2	2	4	4
Iron, total (Fe)	13	0	>1000	2	15.4	86.6	240	244	305	480	855	4100	5300
Lead, total (Pb)	13	13	>25	0	0		10	10	10	10	10	10	10
Mercury, total (Hg)	12	12	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	13	13	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	13	11	>50	0	0		10	10	10	10	10	14	17

Fecal Coliform Screening(#/100mL)

# results:	Geomean	# > 400:	% > 400: %Conf:
57	74	8	14

Key:

result: number of observations

ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

Location: HENRY FORK RIV AT SR 1143 NR BROOKFORD

Station #: C4360000

Hydrologic Unit Code: 03050102

Latitude: 35.65832

Longitude: -81.30838

Stream class: C

Agency: NCAMBNT

NC stream index: 11-129-1-(12.5)

Time period: 01/13/2004 to 12/11/2008

	# results	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
Field													
D.O. (mg/L)	59	0	<4	0	0		6.2	7.1	8	9.2	10.8	12.3	13.9
	59	0	<5	0	0		6.2	7.1	8	9.2	10.8	12.3	13.9
pH (SU)	59	0	<6	4	6.8		5.5	6	6.2	6.5	6.7	7	7.4
	59	0	>9	0	0		5.5	6	6.2	6.5	6.7	7	7.4
Spec. conductance (umhos/cm at 25°C)	58	0	N/A				42	54	65	76	109	151	249
Water Temperature (°C)	59	0	>32	0	0		2	5	8.8	16.1	21.5	25.6	27.2
Other													
TSS (mg/L)	20	3	N/A				2.5	4	6.2	11	45.5	89.9	109
Turbidity (NTU)	59	0	>50	6	10.2	62.3	2.3	2.7	4.5	9	23	60	400
Metals (ug/L)													
Aluminum, total (Al)	13	0	N/A				60	84	240	590	1395	4300	4500
Arsenic, total (As)	13	13	>10	0	0		5	5	5	5	8	10	10
Cadmium, total (Cd)	13	13	>2	0	0		1	1.4	2	2	2	2	2
Chromium, total (Cr)	13	13	>50	0	0		10	16	25	25	25	25	25
Copper, total (Cu)	13	8	>7	0	0		2	2	2	2	4	6	6
Iron, total (Fe)	13	0	>1000	7	53.8	100	360	392	605	1100	1900	5080	5200
Lead, total (Pb)	13	13	>25	0	0		10	10	10	10	10	10	10
Mercury, total (Hg)	12	12	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	13	13	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	13	5	>50	0	0		10	10	10	10	17	28	32

Fecal Coliform Screening(#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
58	133	11	19	

Key:

result: number of observations

ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

Ambient Monitoring System Station Summaries
 NCDENR, Division of Water Quality
 Basinwide Assessment Report

Location: JACOB FORK AT SR 1924 AT RAMSEY
Station #: C4370000
Latitude: 35.59055 **Longitude:** -81.56712
Agency: NCAMBNT

Hydrologic Unit Code: 03050102
Stream class: WS-III ORW
NC stream index: 11-129-2-(4)

Time period: 01/20/2004 to 12/15/2008

	# results	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
Field													
D.O. (mg/L)	45	0	<4	0	0		7.6	8.2	8.9	10.2	12	14.2	16.8
	45	0	<5	0	0		7.6	8.2	8.9	10.2	12	14.2	16.8
pH (SU)	49	0	<6	3	6.1		5.3	6.1	6.4	6.6	6.7	6.9	7.1
	49	0	>9	0	0		5.3	6.1	6.4	6.6	6.7	6.9	7.1
Spec. conductance (umhos/cm at 25°C)	47	0	N/A				19	19	22	23	25	29	30
Water Temperature (°C)	50	0	>32	0	0		1.8	4.6	8	14.2	20	22.3	26.6
Other													
TSS (mg/L)	20	17	N/A				2.5	2.5	2.5	2.5	6.2	9.2	26
Turbidity (NTU)	51	7	>50	0	0		1	1	1.1	1.7	3.3	4.5	19
Nutrients (mg/L)													
NH3 as N	51	50	N/A				0.02	0.02	0.02	0.02	0.02	0.02	0.04
NO2 + NO3 as N	51	6	>10	0	0		0.02	0.02	0.03	0.05	0.07	0.09	0.12
TKN as N	51	49	N/A				0.2	0.2	0.2	0.2	0.2	0.2	0.27
Total Phosphorus	51	30	N/A				0.01	0.02	0.02	0.02	0.02	0.03	0.05
Metals (ug/L)													
Aluminum, total (Al)	13	1	N/A				50	51	56	95	150	442	590
Arsenic, total (As)	13	13	>10	0	0		5	5	5	5	8	10	10
Cadmium, total (Cd)	13	13	>2	0	0		1	1.4	2	2	2	2	2
Chromium, total (Cr)	13	13	>50	0	0		10	16	25	25	25	25	25
Copper, total (Cu)	13	12	>7	0	0		2	2	2	2	2	2	2
Iron, total (Fe)	13	0	>1000	0	0		76	76	91	160	230	484	620
Lead, total (Pb)	13	13	>25	0	0		10	10	10	10	10	10	10
Manganese, total (Mn)	13	9	>200	0	0		10	10	10	10	12	15	16
Mercury, total (Hg)	12	12	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	13	13	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	13	12	>50	0	0		10	10	10	10	10	23	32
Fecal Coliform Screening(#/100mL)													
# results:	Geomean	# > 400:	% > 400:	%Conf:									
51	69	2	4										

Key:

result: number of observations

ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

Location: S FORK CATAWBA RIV AT NC 10 NR STARTOWN

Station #: C4380000

Hydrologic Unit Code: 03050102

Latitude: 35.63311

Longitude: -81.30531

Stream class: WS-IV

Agency: NCAMBNT

NC stream index: 11-129-(0.5)

Time period: 01/13/2004 to 12/11/2008

	# results	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
Field													
D.O. (mg/L)	59	0	<4	0	0		5.5	6.5	7.7	9	10.8	12.3	14.2
	59	0	<5	0	0		5.5	6.5	7.7	9	10.8	12.3	14.2
pH (SU)	59	0	<6	13	22	99.8	5.5	5.7	6	6.4	6.6	6.8	7.3
	59	0	>9	0	0		5.5	5.7	6	6.4	6.6	6.8	7.3
Spec. conductance (umhos/cm at 25°C)	58	0	N/A				37	46	54	58	86	107	190
Water Temperature (°C)	59	0	>32	0	0		1.8	4.9	8.8	16	20.8	24.8	26.7
Other													
TSS (mg/L)	20	1	N/A				2.8	3	5.6	10.4	38.8	53.9	180
Turbidity (NTU)	59	0	>50	7	11.9	76.6	1.9	3.1	5	8.7	24	76	500
Nutrients (mg/L)													
NH3 as N	1	0	N/A				0.04	0.04	0.04	0.04	0.04	0.04	0.04
NO2 + NO3 as N	1	0	>10	0	0		0.49	0.49	0.49	0.49	0.49	0.49	0.49
TKN as N	1	1	N/A				0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total Phosphorus	1	0	N/A				0.02	0.02	0.02	0.02	0.02	0.02	0.02
Metals (ug/L)													
Aluminum, total (Al)	12	0	N/A				92	106	210	585	1625	5690	6800
Arsenic, total (As)	12	12	>10	0	0		5	5	5	5	9	10	10
Cadmium, total (Cd)	12	12	>2	0	0		1	1.3	2	2	2	2	2
Chromium, total (Cr)	12	12	>50	0	0		10	14	25	25	25	25	25
Copper, total (Cu)	12	6	>7	0	0		2	2	2	2	3	6	6
Iron, total (Fe)	12	0	>1000	6	50	100	420	438	540	965	2225	5910	7200
Lead, total (Pb)	12	12	>25	0	0		10	10	10	10	10	10	10
Manganese, total (Mn)	12	0	>200	1	8.3		45	45	50	60	89	211	260
Mercury, total (Hg)	11	11	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	12	12	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	12	9	>50	0	0		10	10	10	10	12	22	24

Fecal Coliform Screening(#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
58	181	15	26	89.7

Key:

result: number of observations

ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality
Basinwide Assessment Report

Location: CLARK CRK AT SR 1008 GROVE ST AT LINCOLNTON

Station #: C4800000

Hydrologic Unit Code: 03050102

Latitude: 35.47532

Longitude: -81.26719

Stream class: WS-IV

Agency: NCAMBNT

NC stream index: 11-129-5-(9.5)

Time period: 01/13/2004 to 12/11/2008

	# results	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
Field													
D.O. (mg/L)	59	0	<4	0	0		6	6.5	7	8.7	10.3	11.2	12.4
	59	0	<5	0	0		6	6.5	7	8.7	10.3	11.2	12.4
pH (SU)	59	0	<6	0	0		6	6.2	6.4	6.6	7	7.2	7.4
	59	0	>9	0	0		6	6.2	6.4	6.6	7	7.2	7.4
Spec. conductance (umhos/cm at 25°C)	58	0	N/A				72	136	190	269	369	491	1023
Water Temperature (°C)	59	0	>32	0	0		3.7	6.4	9.8	14.4	20	23.2	25.2
Other													
TSS (mg/L)	20	3	N/A				4.2	5.1	6.2	11	19.8	122.6	229
Turbidity (NTU)	59	0	>50	9	15.3	93.3	2.5	5.7	9.2	16	32	210	570
Nutrients (mg/L)													
NH3 as N	58	4	N/A				0.02	0.04	0.07	0.1	0.13	0.22	0.34
NO2 + NO3 as N	58	0	>10	0	0		0.16	0.8	1.17	1.55	2.02	2.42	4.5
TKN as N	58	0	N/A				0.28	0.34	0.39	0.5	0.64	0.86	3
Total Phosphorus	58	0	N/A				0.13	0.16	0.19	0.24	0.33	0.58	1.6
Metals (ug/L)													
Aluminum, total (Al)	13	0	N/A				190	218	280	660	1330	5520	6400
Arsenic, total (As)	13	13	>10	0	0		5	5	5	5	8	10	10
Cadmium, total (Cd)	13	13	>2	0	0		1	1.4	2	2	2	2	2
Chromium, total (Cr)	13	13	>50	0	0		10	16	25	25	25	25	25
Copper, total (Cu)	13	6	>7	2	15.4	86.6	2	2	2	2	5	11	13
Iron, total (Fe)	13	0	>1000	8	61.5	100	640	680	845	1300	1850	6400	7200
Lead, total (Pb)	13	12	>25	1	7.7		10	10	10	10	10	21	28
Manganese, total (Mn)	13	0	>200	1	7.7		59	62	84	110	130	234	290
Mercury, total (Hg)	12	12	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	13	13	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	13	6	>50	1	7.7		10	10	10	11	12	78	110
Fecal Coliform Screening(#/100mL)													
# results:	Geomean	# > 400:	% > 400:	%Conf:									
59	610	30	51	100									

Key:

result: number of observations

ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

Location: INDIAN CRK AT SR 1252 NR LABORATORY

Station #: C5170000

Hydrologic Unit Code: 03050102

Latitude: 35.42280

Longitude: -81.25920

Stream class: WS-IV

Agency: NCAMBNT

NC stream index: 11-129-8-(6.5)

Time period: 01/13/2004 to 12/11/2008

	# results	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
Field													
D.O. (mg/L)	59	0	<4	0	0		5.9	7.2	7.6	9.6	10.8	12.4	13.4
	59	0	<5	0	0		5.9	7.2	7.6	9.6	10.8	12.4	13.4
pH (SU)	59	0	<6	9	15.3	93.3	5.5	5.8	6.1	6.4	6.6	7	7.5
	59	0	>9	0	0		5.5	5.8	6.1	6.4	6.6	7	7.5
Spec. conductance (umhos/cm at 25°C)	58	0	N/A				57	60	62	70	74	90	149
Water Temperature (°C)	59	0	>32	0	0		2.8	6	9.3	14.9	20	23.7	25.2
Other													
TSS (mg/L)	20	4	N/A				3	3.6	6	7.2	11.8	19.8	456
Turbidity (NTU)	59	0	>50	6	10.2	62.3	2.9	4.6	6.1	11	17	55	230
Metals (ug/L)													
Aluminum, total (Al)	13	0	N/A				120	128	200	390	605	816	880
Arsenic, total (As)	13	13	>10	0	0		5	5	5	5	8	10	10
Cadmium, total (Cd)	13	13	>2	0	0		1	1.4	2	2	2	2	2
Chromium, total (Cr)	13	13	>50	0	0		10	16	25	25	25	25	25
Copper, total (Cu)	13	10	>7	0	0		2	2	2	2	2	4	5
Iron, total (Fe)	13	0	>1000	7	53.8	100	620	624	805	1100	1450	1620	1700
Lead, total (Pb)	13	12	>25	0	0		10	10	10	10	10	19	25
Manganese, total (Mn)	13	0	>200	0	0		65	67	70	88	108	120	120
Mercury, total (Hg)	12	12	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	13	13	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	13	12	>50	0	0		10	10	10	10	10	12	14

Fecal Coliform Screening(#/100mL)

# results:	Geomean	# > 400:	% > 400:	%Conf:
59	354	22	37	99.9

Key:

result: number of observations

ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

Location: LONG CRK AT SR 1456 NR BESSEMER CITY

Station #: C5900000

Hydrologic Unit Code: 03050102

Latitude: 35.30518

Longitude: -81.23264

Stream class: C

Agency: NCAMBNT

NC stream index: 11-129-16-(4)

Time period: 01/14/2004 to 12/11/2008

	# results	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
Field													
D.O. (mg/L)	59	0	<4	3	5.1		2.9	5.2	6.9	8.2	10	12.3	14.6
	59	0	<5	4	6.8		2.9	5.2	6.9	8.2	10	12.3	14.6
pH (SU)	59	0	<6	7	11.9	76.6	5.1	5.7	6.1	6.5	6.8	7.1	7.5
	59	0	>9	0	0		5.1	5.7	6.1	6.5	6.8	7.1	7.5
Spec. conductance (umhos/cm at 25°C)	57	0	N/A				59	85	92	105	123	144	179
Water Temperature (°C)	59	0	>32	0	0		3.1	6	9.8	16.1	20.8	23	24
Other													
TSS (mg/L)	20	4	N/A				2.5	3.5	4.2	6.2	9.4	11.8	46
Turbidity (NTU)	59	0	>50	5	8.5		2.1	3.7	5.4	8.8	14	39	450
Nutrients (mg/L)													
NH3 as N	58	26	N/A				0.02	0.02	0.02	0.02	0.05	0.09	0.23
NO2 + NO3 as N	58	0	N/A				0.02	0.15	0.33	0.44	0.51	0.57	0.67
TKN as N	58	11	N/A				0.2	0.2	0.21	0.28	0.33	0.62	1.6
Total Phosphorus	58	0	N/A				0.02	0.03	0.04	0.06	0.08	0.19	0.78
Metals (ug/L)													
Aluminum, total (Al)	13	0	N/A				76	102	145	290	615	1632	2100
Arsenic, total (As)	13	13	>10	0	0		5	5	5	5	8	10	10
Cadmium, total (Cd)	13	13	>2	0	0		1	1.4	2	2	2	2	2
Chromium, total (Cr)	13	13	>50	0	0		10	16	25	25	25	25	25
Copper, total (Cu)	13	10	>7	0	0		2	2	2	2	2	4	5
Iron, total (Fe)	13	0	>1000	6	46.2	100	540	564	660	1000	1300	2600	3400
Lead, total (Pb)	13	12	>25	0	0		10	10	10	10	10	11	12
Mercury, total (Hg)	12	12	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	13	13	>88	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	13	11	>50	0	0		10	10	10	10	10	17	20
Fecal Coliform Screening(#/100mL)													
# results:	Geomean	# > 400:	% > 400:	%Conf:									
58	428	23	40	100									

Key:

result: number of observations

ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

Location: S FORK CATAWBA RIV AT NC 7 AT MCADENVILLE

Station #: C6500000

Hydrologic Unit Code: 03050102

Latitude: 35.26014

Longitude: -81.07390

Stream class: WS-V

Agency: NCAMBNT

NC stream index: 11-129-(15.5)

Time period: 01/14/2004 to 12/03/2008

	# results	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
Field													
D.O. (mg/L)	58	0	<4	0	0		5.4	6.5	7.4	9.1	11	12.3	14.8
	58	0	<5	0	0		5.4	6.5	7.4	9.1	11	12.3	14.8
pH (SU)	59	0	<6	6	10.2	62.3	5.5	5.9	6.4	6.7	7	7.1	7.7
	59	0	>9	0	0		5.5	5.9	6.4	6.7	7	7.1	7.7
Spec. conductance (umhos/cm at 25°C)	56	0	N/A				66	79	90	112	155	192	291
Water Temperature (°C)	59	0	>32	0	0		3.3	5.6	9.5	17	22.9	26.2	28.6
Other													
TSS (mg/L)	20	3	N/A				2.5	2.6	6	9.6	18.8	59.7	360
Turbidity (NTU)	59	0	>50	7	11.9	76.6	3.4	5	10	16	25	85	370
Nutrients (mg/L)													
NH3 as N	59	7	N/A				0.02	0.02	0.04	0.05	0.07	0.11	0.23
NO2 + NO3 as N	59	0	>10	0	0		0.31	0.58	0.65	0.78	0.87	1.1	1.4
TKN as N	59	1	N/A				0.2	0.23	0.29	0.37	0.48	0.68	1.5
Total Phosphorus	59	0	N/A				0.04	0.06	0.08	0.1	0.16	0.21	0.6
Metals (ug/L)													
Aluminum, total (Al)	13	0	N/A				130	142	180	850	1700	8160	11000
Arsenic, total (As)	13	13	>10	0	0		5	5	5	5	8	10	10
Cadmium, total (Cd)	13	13	>2	0	0		1	1.4	2	2	2	2	2
Chromium, total (Cr)	13	13	>50	0	0		10	16	25	25	25	25	25
Copper, total (Cu)	13	6	>7	1	7.7		2	2	2	2	4	10	14
Iron, total (Fe)	13	0	>1000	8	61.5	100	570	606	675	1400	2250	10560	15000
Lead, total (Pb)	13	11	>25	0	0		10	10	10	10	10	11	11
Manganese, total (Mn)	13	0	>200	1	7.7		37	42	50	58	88	470	710
Mercury, total (Hg)	12	12	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	13	13	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	13	8	>50	1	7.7		10	10	10	10	14	37	51
Fecal Coliform Screening(#/100mL)													
# results:	Geomean	# > 400:	% > 400:	%Conf:									
59	160	12	20	60.2									

Key:

result: number of observations

ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

%Conf : States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

Ambient Monitoring System Station Summaries

NCDENR, Division of Water Quality

Basinwide Assessment Report

Location: S FORK CATAWBA RIV AT SR 2524 NR SOUTH BELMONT

Station #: C7000000

Hydrologic Unit Code: 03050102

Latitude: 35.16666

Longitude: -81.03825

Stream class: WS-V B

Agency: NCAMBNT

NC stream index: 11-(123.5)

Time period: 02/18/2004 to 12/08/2008

	# results	# ND	EL	Results not meeting EL			Percentiles						
				#	%	%Conf	Min	10th	25th	50th	75th	90th	Max
Field													
D.O. (mg/L)	59	0	<4	0	0		5.2	6.2	6.8	7.9	9.1	9.9	10.7
	59	0	<5	0	0		5.2	6.2	6.8	7.9	9.1	9.9	10.7
pH (SU)	59	0	<6	2	3.4		5.5	6	6.3	6.6	7.3	7.8	8.3
	59	0	>9	0	0		5.5	6	6.3	6.6	7.3	7.8	8.3
Spec. conductance (umhos/cm at 25°C)	57	0	N/A				54	67	73	83	100	115	128
Water Temperature (°C)	59	0	>32	16	27.1	100	9.6	14.3	18.3	24.5	33.5	34.5	38.1
Other													
Chlorophyll a (ug/L)	2	0	>40	0	0		8	8	8	8	8	8	8
TSS (mg/L)	20	5	N/A				4	5	5.9	6.4	9	32.7	50
Turbidity (NTU)	59	0	>25	4	6.8		4.4	5.5	6.8	8.5	11	16	150
Nutrients (mg/L)													
NH3 as N	1	0	N/A				0.02	0.02	0.02	0.02	0.02	0.02	0.02
NO2 + NO3 as N	1	0	>10	0	0		0.35	0.35	0.35	0.35	0.35	0.35	0.35
TKN as N	1	0	N/A				0.36	0.36	0.36	0.36	0.36	0.36	0.36
Total Phosphorus	1	0	N/A				0.04	0.04	0.04	0.04	0.04	0.04	0.04
Metals (ug/L)													
Aluminum, total (Al)	13	0	N/A				180	184	260	290	985	3620	5100
Arsenic, total (As)	13	13	>10	0	0		5	5	5	5	5	10	10
Cadmium, total (Cd)	13	13	>2	0	0		1	1	2	2	2	2	2
Chromium, total (Cr)	13	13	>50	0	0		10	10	25	25	25	25	25
Copper, total (Cu)	13	1	>7	9	69.2	100	2	3	6	8	8	9	10
Iron, total (Fe)	13	0	>1000	3	23.1	96.6	270	294	365	480	1050	3940	5500
Lead, total (Pb)	13	13	>25	0	0		10	10	10	10	10	10	10
Manganese, total (Mn)	13	0	>200	0	0		35	35	38	45	68	96	110
Mercury, total (Hg)	12	12	>0.012	0	0		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nickel, total (Ni)	13	13	>25	0	0		10	10	10	10	10	10	10
Zinc, total (Zn)	13	10	>50	0	0		10	10	10	10	10	19	25

Fecal Coliform Screening(#/100mL)

# results:	Geomean	# > 400:	% > 400: %Conf:
59	15	3	5

Key:

result: number of observations

ND: number of observations reported to be below detection level (non-detect)

EL: Evaluation Level; applicable numeric or narrative water quality standard or action level

Results not meeting EL: number and percentages of observations not meeting evaluation level

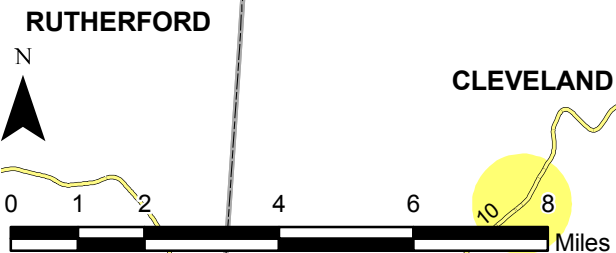
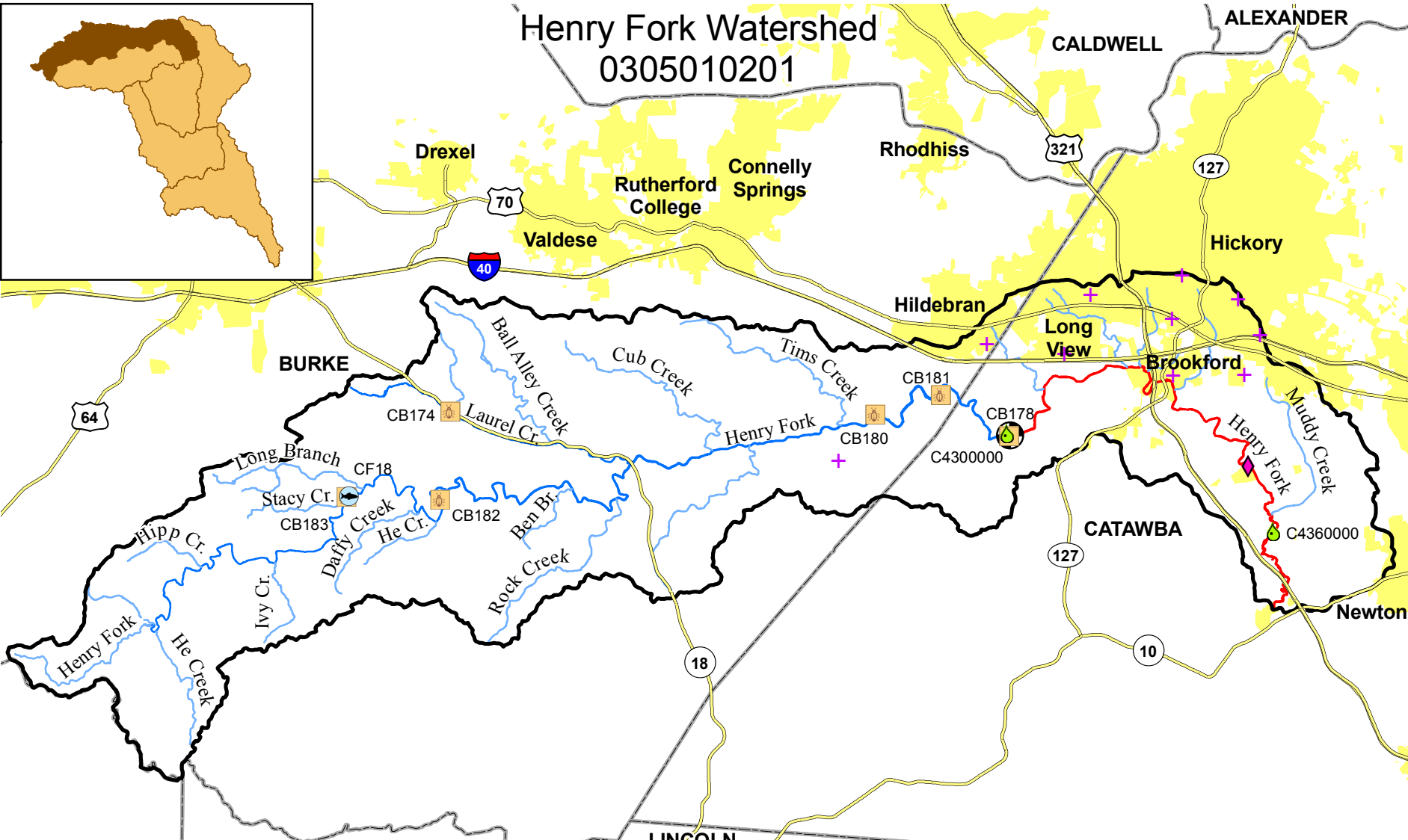
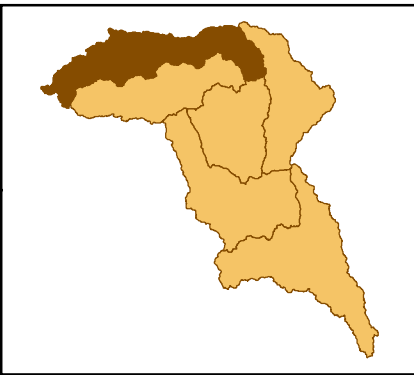
%Conf: States the percent statistical confidence that the actual percentage of exceedances is at least 10% (20% for Fecal Coliform)

Stations with less than 10 results for a given parameter were not evaluated for statistical confidence

APPENDIX 2-D

WATERSHED MAPS

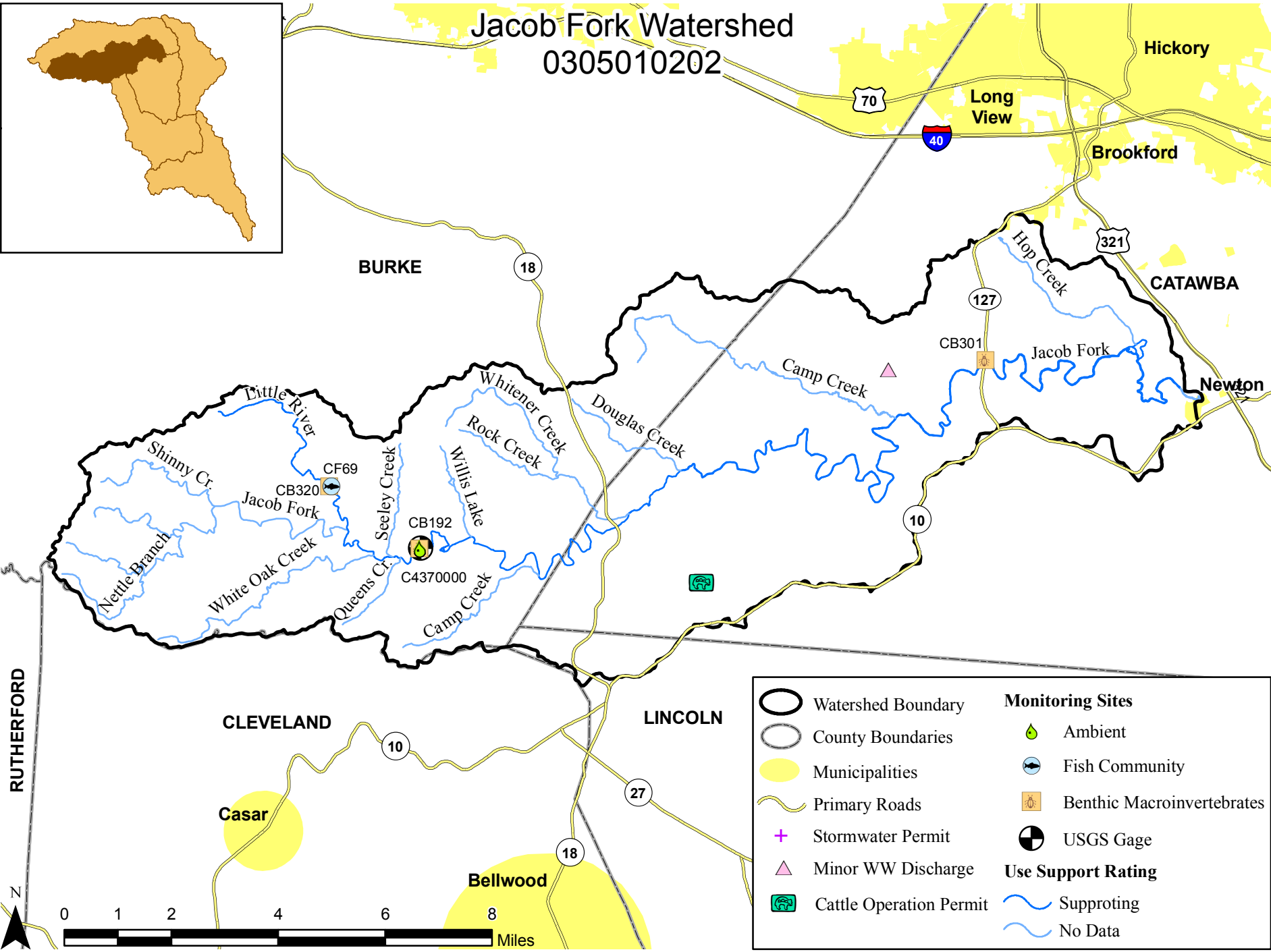
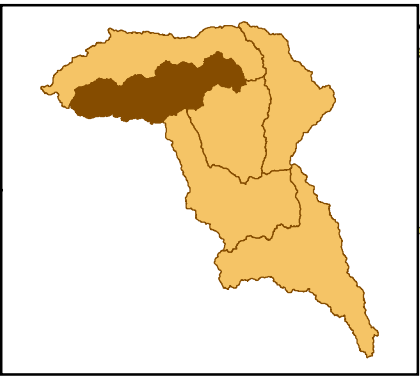
Henry Fork Watershed 0305010201



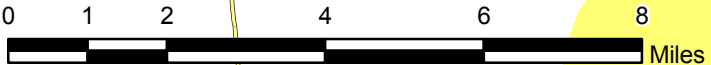
Watershed Boundary	Major WW Discharge	Monitoring Sites
County Boundaries	Use Support Rating	Ambient
Municipalities	Supporting	Fish Community
Primary Roads	Impaired	Benthic Macroinvertebrates
Stormwater Permit	Data Inconclusive	USGS Gage
	No Data	

Jacob Fork Watershed

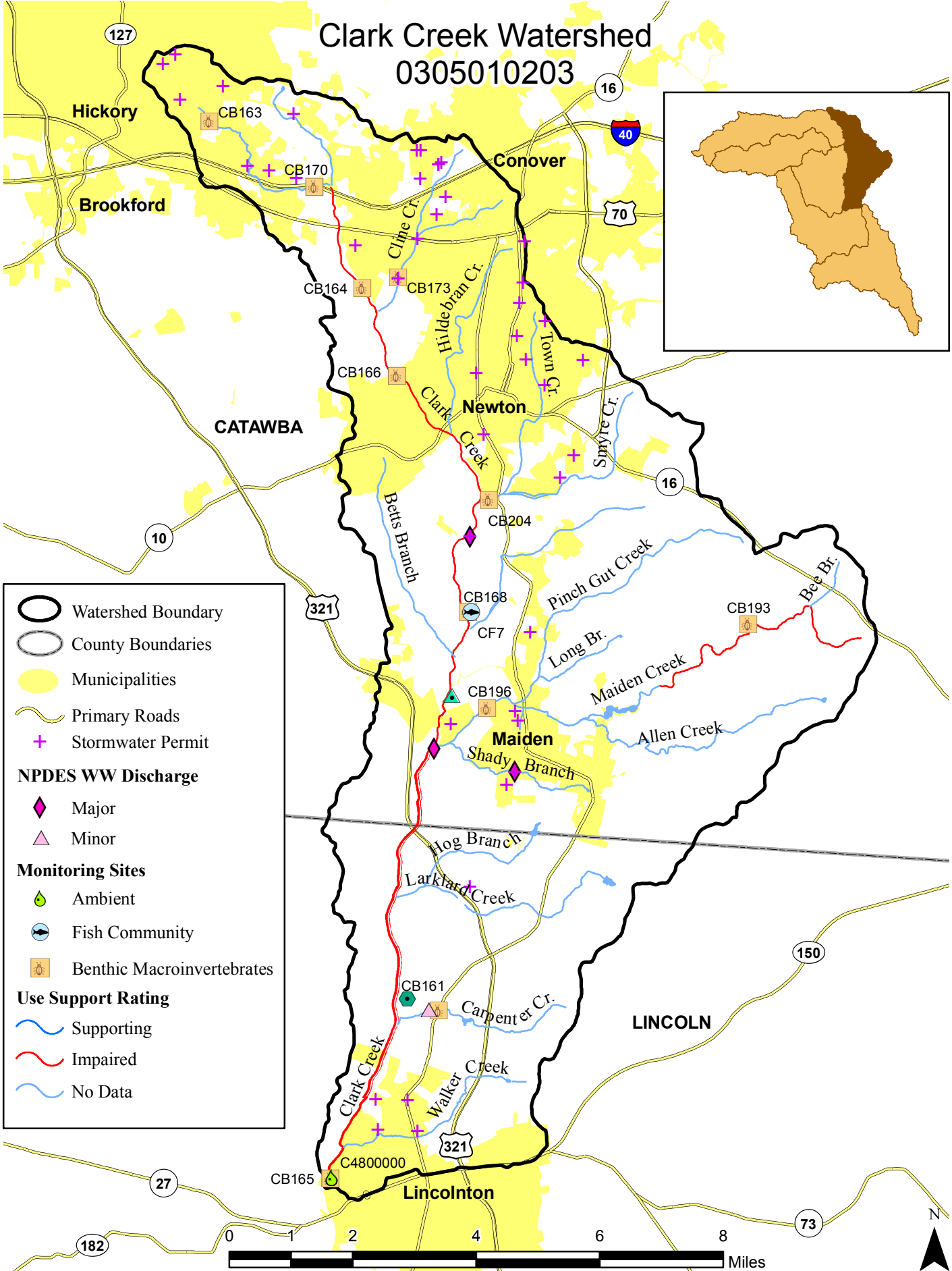
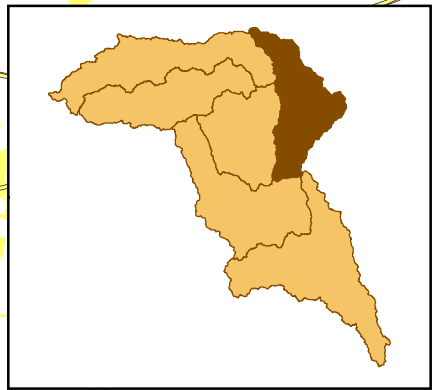
0305010202



	Watershed Boundary	Monitoring Sites	
	County Boundaries		Ambient
	Municipalities		Fish Community
	Primary Roads		Benthic Macroinvertebrates
	Stormwater Permit		USGS Gage
	Minor WW Discharge	Use Support Rating	
	Cattle Operation Permit		Supporting
			No Data



Clark Creek Watershed 0305010203

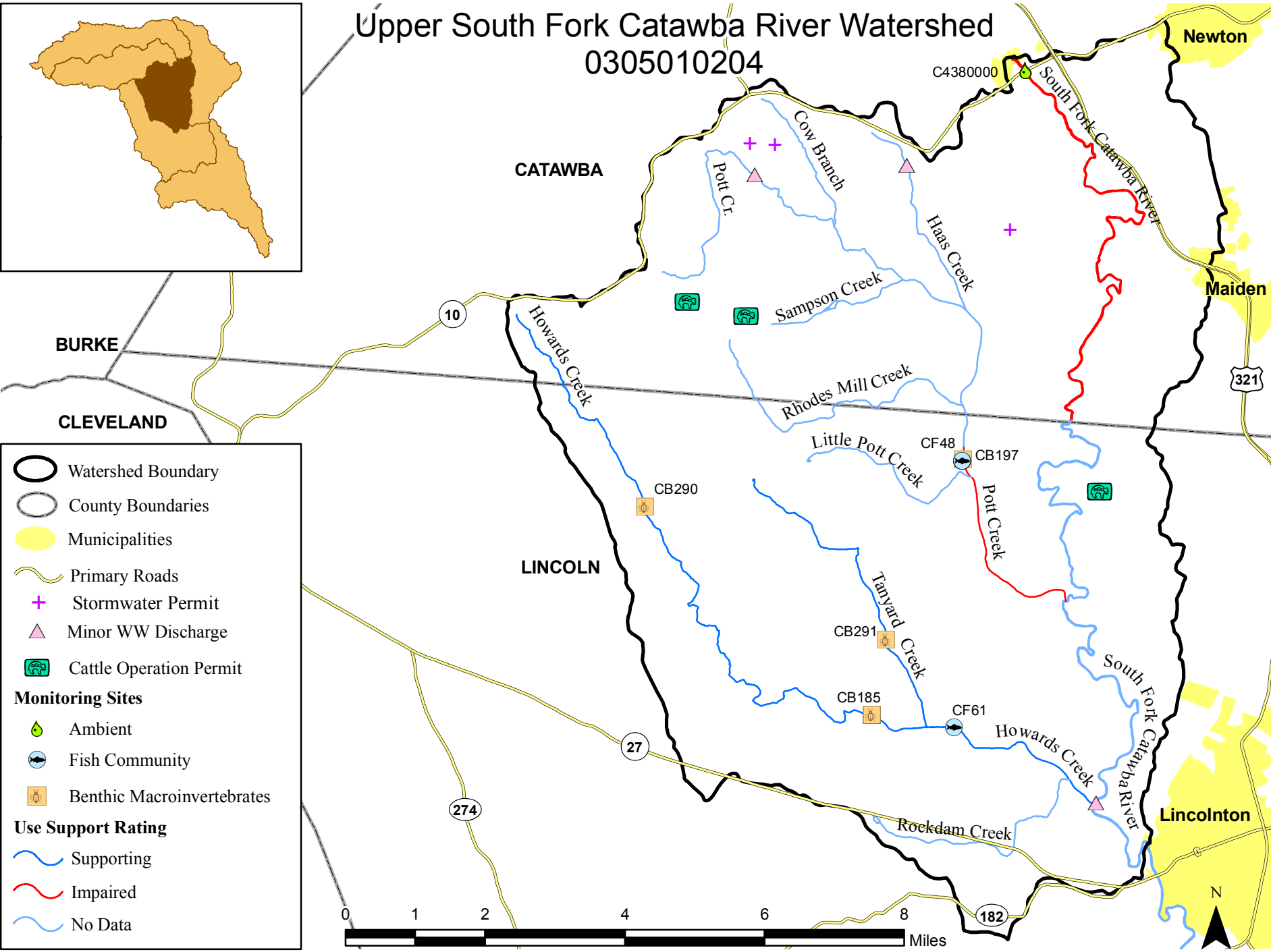
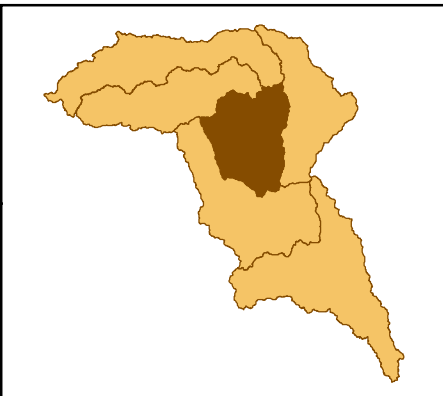


- Watershed Boundary
- County Boundaries
- Municipalities
- Primary Roads
- Stormwater Permit
- NPDES WW Discharge**
- Major
- Minor
- Monitoring Sites**
- Ambient
- Fish Community
- Benthic Macroinvertebrates
- Use Support Rating**
- Supporting
- Impaired
- No Data



Upper South Fork Catawba River Watershed

0305010204



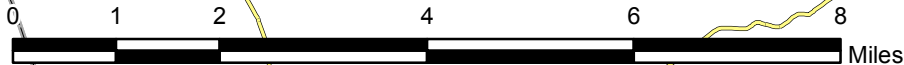
- Watershed Boundary
- County Boundaries
- Municipalities
- Primary Roads
- Stormwater Permit
- Minor WW Discharge
- Cattle Operation Permit

Monitoring Sites

- Ambient
- Fish Community
- Benthic Macroinvertebrates

Use Support Rating

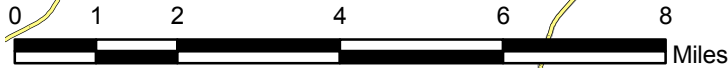
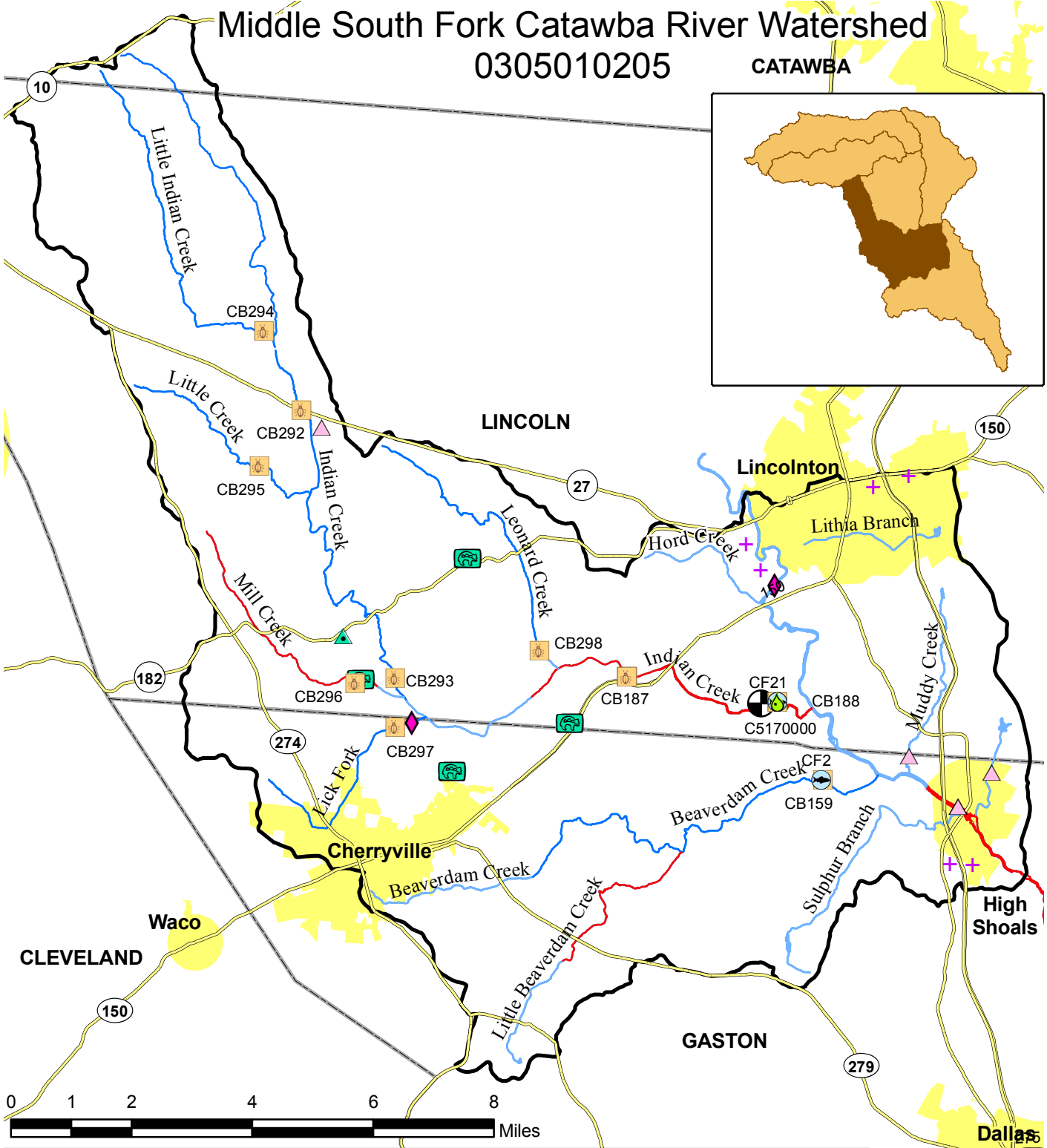
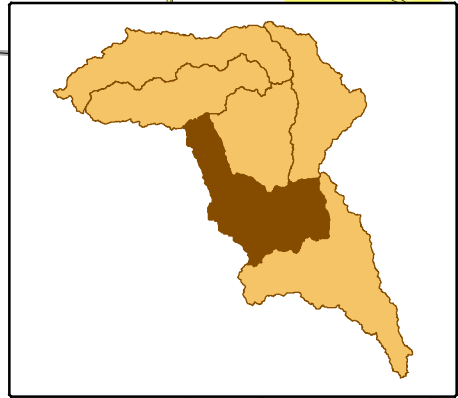
- Supporting
- Impaired
- No Data



Middle South Fork Catawba River Watershed

0305010205

CATAWBA



Watershed Boundary	Stormwater Permit	NPDES WW Discharge
County Boundaries	Monitoring Sites	Major
Municipalities	Ambient	Minor
Primary Roads	Fish Community	Use Support Rating
Cattle Operation Permit	Benthic Macroinvertebrates	Supporting
Minor Non-Discharge Facility	USGS Gage	Impaired
		No Data

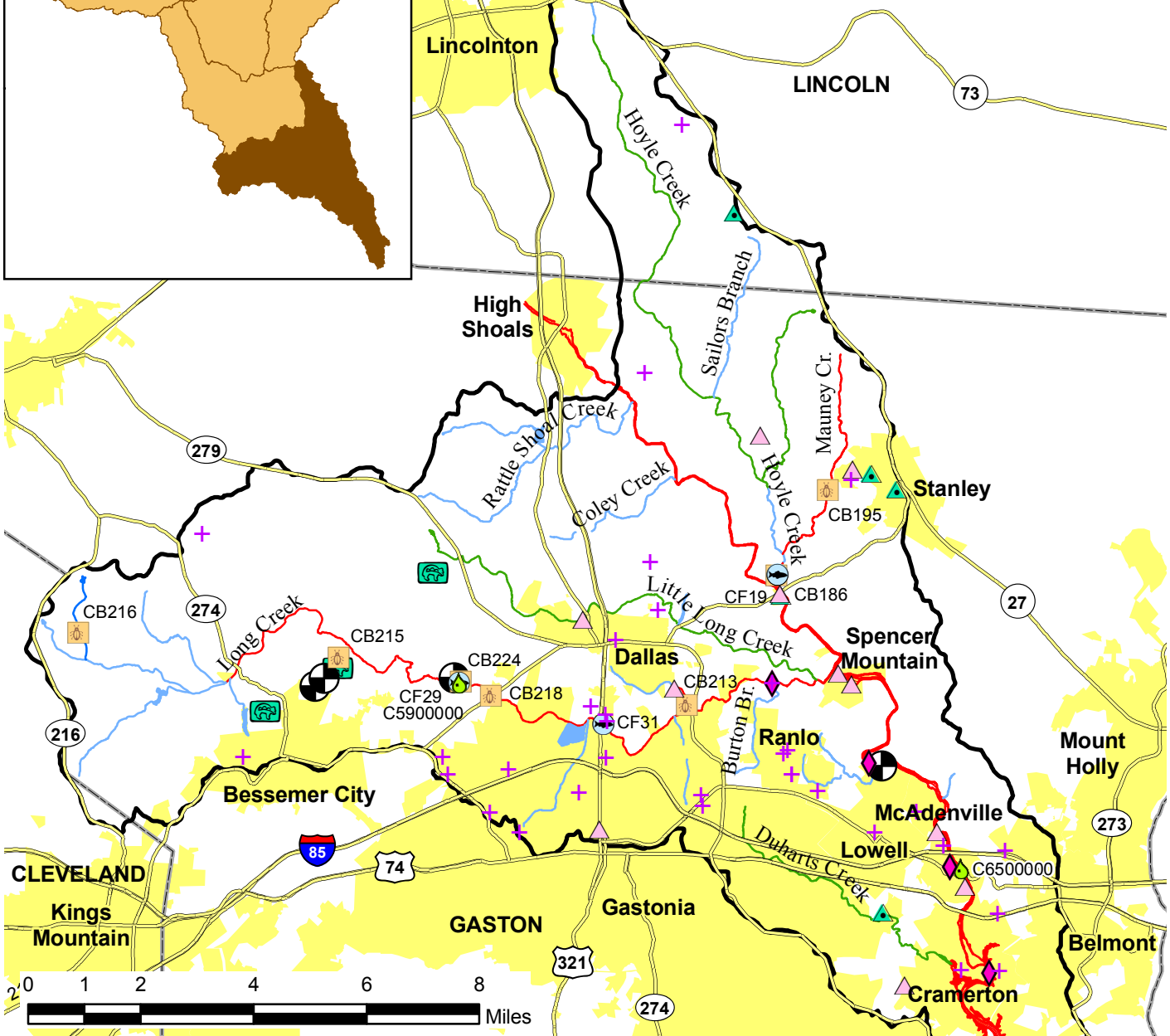
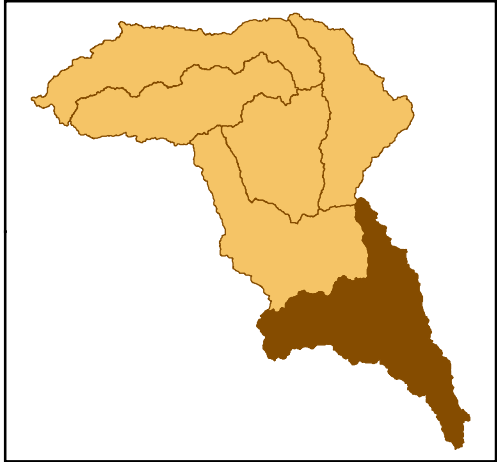
Dallas

Gastonia

N

Lower South Fork Catawba River

0305010206



Watershed Boundary	Monitoring Sites
County Boundaries	Ambient
Municipalities	Fish Community
Primary Roads	Benthic Macroinvertebrates
Cattle Operation Permit	USGS Gage
Minor Non-Discharge Facility	Use Support Rating
Stormwater Permit	Supporting
NPDES WW Discharge	Impaired
Major	Data Inconclusive
Minor	No Data



APPENDIX 2-E

PERMITS

TABLE 2E-1: WASTEWATER DISCHARGE PERMITS IN THE SOUTH FORK CATAWBA RIVER WATERSHED

PERMIT #	OWNER	FACILITY NAME	PERMIT TYPE	CLASS	COUNTY	REGION	PERMIT FLOW (GAL./DAY)
NC0004812	Pharr Yarns Inc	Pharr Yarns Industrial WWTP	Industrial Process & Commercial	Major	Gaston	Mooreville	1000000
NC0004979	Duke Energy Carolinas LLC	Allen Steam Station	Industrial Process & Commercial	Major	Gaston	Mooreville	1000000
NC0005274	Kings Mountain Venture #1 LLC	Kings Mountain Venture #1, LLC	Industrial Process & Commercial	Major	Gaston	Mooreville	400000
NC0006033	Town of Cramerton	Eagle Road WWTP	Municipal, Large	Major	Gaston	Mooreville	4000000
NC0006190	Delta Apparel, Inc.	Delta Apparel / Maiden	Industrial Process & Commercial	Major	Catawba	Mooreville	1000000
NC0020036*	Town of Stanley	Lola Street WWTP	Municipal, < 1MGD	Minor	Gaston	Mooreville	500000
NC0020052	Town of McAdenville	McAdenville WWTP	Municipal, < 1MGD	Minor	Gaston	Mooreville	130000
NC0020184*	City of Gastonia	Long Creek WWTP	Municipal, Large	Major	Gaston	Mooreville	16000000
NC0020966	Town of Spencer Mountain	Spencer Mountain WWTP	Municipal, < 1MGD	Minor	Gaston	Mooreville	50000
NC0022934	UCS, Inc	UCS, Inc - Main Plant	Industrial Process & Commercial	Minor	Gaston	Mooreville	5300
NC0023761	National Fruit Product Company, Inc.	National Fruit Product Company	Industrial Process & Commercial	Minor	Lincoln	Mooreville	not limited
NC0024155	City of High Shoals	River Street WWTP	Municipal, < 1MGD	Minor	Gaston	Mooreville	18000
NC0025496*	City of Lincolnton	Lincolnton WWTP	Municipal, Large	Major	Lincoln	Mooreville	6000000
NC0025861	City of Lowell	Lowell WWTP	Municipal, < 1MGD	Minor	Gaston	Mooreville	600000
NC0029297	Catawba County Schools	Fred T. Foard High School	100% Domestic < 1MGD	Minor	Catawba	Mooreville	30000
NC0032760	Carolina Water Service, Inc. of North Carolina	Kings Grant WWTP	100% Domestic < 1MGD	Minor	Gaston	Mooreville	70000
NC0033421	Carolina Water Service, Inc. of North Carolina	College Park WWTP	100% Domestic < 1MGD	Minor	Gaston	Mooreville	22000
NC0036196*	City of Newton	Clark Creek WWTP	Municipal, Large	Major	Catawba	Mooreville	7500000
NC0036935	Pine Mountain Property Owners Assoc	Pine Mountain Lakes WWTP	100% Domestic < 1MGD	Minor	Burke	Asheville	69600
NC0039594*	Town of Maiden	Maiden WWTP	Municipal, Large	Major	Catawba	Mooreville	1000000
NC0040070	City of Gastonia	Gastonia WTP	Water Treatment Plant	Minor	Gaston	Mooreville	1200000
NC0040797*	City of Hickory	Henry Fork WWTP	Municipal, Large	Major	Catawba	Mooreville	9000000
NC0041246	Lincoln County Schools	West Lincoln High School	100% Domestic < 1MGD	Minor	Lincoln	Mooreville	14000
NC0044440	City of Cherryville	Cherryville WWTP	Municipal, Large	Major	Gaston	Mooreville	2000000
NC0066141	Town of Spencer Mountain	Spencer Mountain WTP	Water Treatment Plant	Minor	Gaston	Mooreville	10000
NC0068888	Town of Dallas	Dallas WWTP	Municipal, < 1MGD	Minor	Gaston	Mooreville	600000
NC0071447	The Diocese of Charlotte	Catholic Conference Center WWTP	100% Domestic < 1MGD	Minor	Catawba	Mooreville	20000

* The asterisk indicates the NPDES permits with Pretreatment Programs. See the Point Source Contributors - Pretreatment section of the Subbasin Chapters for more details on Pretreatment Programs.

TABLE 2E-1: WASTEWATER DISCHARGE PERMITS IN THE SOUTH FORK CATAWBA RIVER WATERSHED

PERMIT #	OWNER	FACILITY NAME	PERMIT TYPE	CLASS	COUNTY	REGION	PERMIT FLOW (GAL./DAY)
NC0072940	City of High Shoals	State Street WWTP	Municipal, < 1MGD	Minor	Gaston	Mooreville	15900
NC0074233	Catawba County Schools	Blackburn Elementary School	100% Domestic < 1MGD	Minor	Catawba	Mooreville	15000
NC0076643	General Electric Company - Hickory	Hickory Plant	Groundwater Remediation	Minor	Catawba	Mooreville	120000
NC0077763	City of Belmont	Belmont WTP	Water Treatment Plant	Minor	Gaston	Mooreville	not limited
NC0080195	Forest Hills Mobile Home Estate	Forest Hills Mobile Home Estate WTP	Water Treatment Plant	Minor	Gaston	Mooreville	not limited
NC0082694	Town of Dallas	Dallas WTP	Water Treatment Plant	Minor	Gaston	Mooreville	not limited
NC0085588	City of Lincolnton	Lincolnton WTP	Water Treatment Plant	Minor	Lincoln	Mooreville	not limited
NC0088374	City of High Shoals	River Street WWTP	Municipal, < 1MGD	Minor	Gaston	Mooreville	60000
NC0088684	Daniel Jonathan Stowe Conservancy	Daniel Stowe Botanical Garden	Water Treatment Plant	Minor	Gaston	Mooreville	3800

* The asterisk indicates the NPDES permits with Pretreatment Programs. See the Point Source Contributors - Pretreatment section of the Subbasin Chapters for more details on Pretreatment Programs.

TABLE 2E-2: NON-DISCHARGE PERMITS IN THE SOUTH FORK CATAWBA RIVER WATERSHED

PERMIT #	OWNER	FACILITY NAME	OWNER TYPE	PERMIT TYPE	CLASS	COUNTY	REGION
WQ0000430	City of Cherryville	City of Cherryville Residuals Land Application Program	Local Government	Land Application of Residual Solids	Minor	Gaston	Mooreville
WQ0001793	City of Gastonia	City of Gastonia Residuals Land Application Program (D)	Local Government	Land Application of Residual Solids	Major	Gaston	Mooreville
WQ0002264	City of Bessemer City	City of Bessemer City Residuals Land Application Program	Local Government	Land Application of Residual Solids (503 exempt)	Minor	Gaston	Mooreville
WQ0002544	Clariant Corporation	Mount Holly West Facility	Private	Land Application of Residual Solids	Minor	Gaston	Mooreville
WQ0002618	Town of Cramerton	Town of Cramerton Residuals Land Application Program	Local Government	Land Application of Residual Solids	Minor	Gaston	Mooreville
WQ0002712	City of Lincolnton	City of Lincolnton Residuals Land Application Program	Local Government	Land Application of Residual Solids	Major	Lincoln	Mooreville
WQ0003902	City of Newton	City of Newton Residuals Land Application Program	Local Government	Land Application of Residual Solids	Major	Catawba	Mooreville
WQ0006984	Delta Apparel Inc.	Maiden, NC Plan Residuals Land Application Program (D)	Private	Land Application of Residual Solids (503 exempt)	Minor	Catawba	Mooreville

TABLE 2E-3: NPDES STORMWATER PERMITS IN THE SOUTH FORK CATAWBA RIVER WATERSHED

PERMIT #		FACILITY NAME		OWNER		PERMIT TYPE		REGION		COUNTY	
NCG020054	Benchmk Carolina Agg-Bess	Benchmk Carolina Agg	Benchmk Carolina Agg	Mining Activities Stormwater Discharge	COC	Mooresville	Gaston				
NCG020085	Hickory Quarry	Martin Marietta Materials Inc	Martin Marietta Materials Inc	Mining Activities Stormwater Discharge	COC	Mooresville	Catawba				
NCG020135	Martin Marietta-Bessimer City	Martin Marietta Materials Inc	Martin Marietta Materials Inc	Mining Activities Stormwater Discharge	COC	Mooresville	Gaston				
NCG020199	Martin Marietta-Gaston Hwy 321	Martin Marietta Materials Inc	Martin Marietta Materials Inc	Mining Activities Stormwater Discharge	COC	Mooresville	Gaston				
NCG020286	Maiden Quarry	Martin Marietta Materials Inc	Martin Marietta Materials Inc	Mining Activities Stormwater Discharge	COC	Mooresville	Catawba				
NCG020579	Rea Contracting Co. - Sand Pit 104	Rea Contracting LLC	Rea Contracting LLC	Mining Activities Stormwater Discharge	COC	Mooresville	Gaston				
NCG020638	Deal Property			Mining Activities Stormwater Discharge	COC	Mooresville	Lincoln				
NCG030021	Danaher Tool Group	Danaher Tool Group	Danaher Tool Group	Metal Fabrication Stormwater Discharge	COC	Mooresville	Gaston				
NCG030130	Gastonia Components & Logistics	Gastonia Components & Logistics	Gastonia Components & Logistics	Metal Fabrication Stormwater Discharge	COC	Mooresville	Gaston				
NCG030164	Hickory Springs Metals Complex	Hickory Springs Manufacturing Company	Hickory Springs Manufacturing Company	Metal Fabrication Stormwater Discharge	COC	Mooresville	Catawba				
NCG030166	Timken Co-Lincolnton	The Timken Company	The Timken Company	Metal Fabrication Stormwater Discharge	COC	Mooresville	Lincoln				
NCG030167	Vermont American Corporation	Robert Bosch Corp	Robert Bosch Corp	Metal Fabrication Stormwater Discharge	COC	Mooresville	Lincoln				
NCG030233	A T S Remanufacturing Incorporated	A T S Remanufacturing Inc	A T S Remanufacturing Inc	Metal Fabrication Stormwater Discharge	COC	Mooresville	Gaston				
NCG030243	Corning Cable Systems LLC, OAP	Corning Cable Systems	Corning Cable Systems	Metal Fabrication Stormwater Discharge	COC	Mooresville	Catawba				
NCG030246	Corning Cable Systems LLC - Hickory	Corning Cable Systems LLC	Corning Cable Systems LLC	Metal Fabrication Stormwater Discharge	COC	Mooresville	Catawba				
NCG030345	Metso Minerals Inc	Metso Minerals Inc	Metso Minerals Inc	Metal Fabrication Stormwater Discharge	COC	Mooresville	Gaston				
NCG030380	Jenkins Metal Corportion	Jenkins Metal Corportion	Jenkins Metal Corportion	Metal Fabrication Stormwater Discharge	COC	Mooresville	Gaston				
NCG030413	Wix Corporation- Ozark Plant	Wix Corporation	Wix Corporation	Metal Fabrication Stormwater Discharge	COC	Mooresville	Gaston				
NCG030475	Getrag Corp	Getrag Corporation	Getrag Corporation	Metal Fabrication Stormwater Discharge	COC	Mooresville	Catawba				
NCG030482	Commscope Inc-Tech Info Center	Commscope Inc	Commscope Inc	Metal Fabrication Stormwater Discharge	COC	Mooresville	Catawba				
NCG030483	CMC Rebar Carolinas	Cmc Rebar Carolinas	Cmc Rebar Carolinas	Metal Fabrication Stormwater Discharge	COC	Mooresville	Gaston				
NCG030492	Stabilus	Stabilus	Stabilus	Metal Fabrication Stormwater Discharge	COC	Mooresville	Gaston				
NCG030535	Z.F. Lemforder	Z.F. Lemforder	Z.F. Lemforder	Metal Fabrication Stormwater Discharge	COC	Mooresville	Catawba				
NCG050163	R R Donnelley Printing Co	R R Donnelley Printing Co	R R Donnelley Printing Co	Apparel/Printing/Paper/Leather/Rubber Stormwater Discharge	COC	Mooresville	Catawba				
NCG050180	UCS, Inc - Main Plant	UCS, Inc	UCS, Inc	Apparel/Printing/Paper/Leather/Rubber Stormwater Discharge	COC	Mooresville	Gaston				
NCG050190	Hickory Springs-Conover Complex	Hickory Springs Manufacturing Company	Hickory Springs Manufacturing Company	Apparel/Printing/Paper/Leather/Rubber Stormwater Discharge	COC	Mooresville	Catawba				

TABLE 2E-3: NPDES STORMWATER PERMITS IN THE SOUTH FORK CATAWBA RIVER WATERSHED

PERMIT #	FACILITY NAME	OWNER	PERMIT TYPE			REGION	COUNTY
			Apparel/Printing/Paper/Leather/Rubber Stormwater Discharge COC	Apparel/Printing/Paper/Leather/Rubber Stormwater Discharge COC	Apparel/Printing/Paper/Leather/Rubber Stormwater Discharge COC		
NCG050292	Shurtape Tech Incorporated-Highland	Shurtape Technologies, LLC	Apparel/Printing/Paper/Leather/Rubber Stormwater Discharge COC			Mooresville	Catawba
NCG050297	Klingspor Abrasives Incorporated	Klingspor Abrasives Inc	Apparel/Printing/Paper/Leather/Rubber Stormwater Discharge COC			Mooresville	Catawba
NCG050329	International Cushioning Company LLC	International Cushioning Company LLC	Apparel/Printing/Paper/Leather/Rubber Stormwater Discharge COC			Mooresville	Catawba
NCG050339	Temp Vent, Corp.	Air Vent, Inc.	Apparel/Printing/Paper/Leather/Rubber Stormwater Discharge COC			Mooresville	Lincoln
NCG060044	National Fruit Product Company	National Fruit Product Company Inc	Food/Tobacco/Soaps/Cosmetics/Public Warehousing Stormwater Discharge COC			Mooresville	Lincoln
NCG060157	Orograin Bakeries Manufacturing, Inc.	Orograin Bakeries Manufacturing Inc	Food/Tobacco/Soaps/Cosmetics/Public Warehousing Stormwater Discharge COC			Mooresville	Gaston
NCG060158	Midstate Mills Incorporated	Midstate Mills Inc	Food/Tobacco/Soaps/Cosmetics/Public Warehousing Stormwater Discharge COC			Mooresville	Catawba
NCG060298	Flowers Baking Company of Newton, LLC	Flowers Baking Company of Newton LLC	Food/Tobacco/Soaps/Cosmetics/Public Warehousing Stormwater Discharge COC			Mooresville	Catawba
NCG060307	Target Distribution Center #3811	Target Distribution Center #3811	Food/Tobacco/Soaps/Cosmetics/Public Warehousing Stormwater Discharge COC			Mooresville	Catawba
NCG070008	American Slate & Marble - Hickory	American Slate & Marble	Stone, Clay, Glass, and Concrete Products Stormwater Discharge COC			Mooresville	Catawba
NCG070063	Hairfield Vault Co-Catawba	Hairfield Vault Co	Stone, Clay, Glass, and Concrete Products Stormwater Discharge COC			Mooresville	Catawba
NCG080034	Poteat Motor Lines Incorporated	Poteat Motor Lines Inc	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC			Mooresville	Catawba
NCG080117	Roadway Services-Conover	Roadway Services Inc	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC			Asheville	Buncombe
NCG080174	AAA Cooper Transport-Mecklenburg	AAA Cooper Transport	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC			Mooresville	Mecklenburg
NCG080175	Century Furn Ind - Hildebran	Century Furn Ind	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC			Asheville	Burke
NCG080180	United Parcel Service-Gastonia	United Parcel Service	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC			Mooresville	Gaston
NCG080275	Gaines Motor Lines Inc-Hickor	Gaines Motor Lines Inc	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC			Mooresville	Catawba
NCG080285	Zenith Freight Lines LLC	Zenith Freight Lines LLC	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC			Mooresville	Catawba
NCG080402	Hickory Vehicle Maintenance Facility	US Postal Service - Vmf	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC			Mooresville	Catawba

TABLE 2E-3: NPDES STORMWATER PERMITS IN THE SOUTH FORK CATAWBA RIVER WATERSHED						
PERMIT #	FACILITY NAME	OWNER	PERMIT TYPE	REGION	COUNTY	
NCG080446	Advance Auto Parts 25	Advance Auto Parts	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC	Mooreville	Gaston	
NCG080494	NC Nat Gd- Lincoln	N C National Guard	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC	Mooreville	Lincoln	
NCG080504	NC Nat Gd- Newton	N C National Guard	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC	Mooreville	Catawba	
NCG080631	Fedex Freight - Conover	Fedex Freight East Inc	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC	Mooreville	Catawba	
NCG080669	Newton City - Public Works Complex	City of Newton	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC	Mooreville	Catawba	
NCG080680	Hagan Kennington Oil	Hagan Kennington Oil	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC	Mooreville	Gaston	
NCG080701	Gastonia Vehicle Maintenance Facility	City of Gastonia	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC	Mooreville	Gaston	
NCG080825	Fedex Ground Home Delivery	Fedex Ground Package System	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC	Mooreville	Catawba	
NCG080830	A & G Terminals, LLC	A & G Terminals LLC	Transportation w/Vehicle Maintenance/Petroleum Bulk/Oil Water Separator Stormwater Discharge COC	Asheville	Burke	
NCG090002	Premium Coatings Incorporated	Premium Coatings Inc	Paints, Varnishes, Lacquers Stormwater Discharge COC	Mooreville	Catawba	
NCG110033	Clark Creek WWTP	City of Newton	Municipal WWTP > 1MGD, Stormwater Discharge, COC	Mooreville	Catawba	
NCG110034	Hickory City - Regional Compost Facility	City of Hickory	Municipal WWTP > 1MGD, Stormwater Discharge, COC	Mooreville	Catawba	
NCG110037	Hickory City-Henry Fork WWTP	City of Hickory	Municipal WWTP > 1MGD, Stormwater Discharge, COC	Mooreville	Catawba	
NCG110056	Long Creek WWTP	City of Gastonia	Municipal WWTP > 1MGD, Stormwater Discharge, COC	Mooreville	Gaston	
NCG110125	Town of Cramerto WWTP	Town of Cramerton	Municipal WWTP > 1MGD, Stormwater Discharge, COC	Mooreville	Gaston	
NCG110130	Town of Stanley WWTP	Town of Stanley	Municipal WWTP > 1MGD, Stormwater Discharge, COC	Mooreville	Gaston	
NCG110132	Town of Maiden WWTP	Town of Maiden	Municipal WWTP > 1MGD, Stormwater Discharge, COC	Mooreville	Catawba	
NCG110134	City of Lincoln WWTP	City of Lincoln	Municipal WWTP > 1MGD, Stormwater Discharge, COC	Mooreville	Lincoln	
NCG110135	Cherryville WWTP	Cherryville WWTP	Municipal WWTP > 1MGD, Stormwater Discharge, COC	Mooreville	Gaston	
NCG120001	Catawba Co- Landfill	Catawba Co	Landfill Stormwater Discharge COC	Mooreville	Catawba	
NCG120012	Gaston Co Landfill	Gaston County	Landfill Stormwater Discharge COC	Mooreville	Gaston	
NCG120081	Lincoln County Landfill	Lincoln County	Landfill Stormwater Discharge COC	Mooreville	Lincoln	
NCG140051	Concrete Supply Co-Gastonia Pl	Concrete Supply Co	Ready Mix Concrete Stormwater/Wastewater Discharge COC	Mooreville	Gaston	
NCG140230	Ready Mixed Concrete Co - Maiden	Ready Mixed Concrete	Ready Mix Concrete Stormwater/Wastewater Discharge COC	Mooreville	Catawba	

TABLE 2E-3: NPDES STORMWATER PERMITS IN THE SOUTH FORK CATAWBA RIVER WATERSHED

PERMIT #	FACILITY NAME	OWNER	PERMIT TYPE			REGION	COUNTY
			Asphalt Paving Mixture Stormwater Discharge COC	Asphalt Paving Mixture Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC		
NCG160070	Maymead Materials, Inc.-Hickory	Maymead Materials Inc	Asphalt Paving Mixture Stormwater Discharge COC	Asphalt Paving Mixture Stormwater Discharge COC	Asphalt Paving Mixture Stormwater Discharge COC	Mooresville	Catawba
NCG160086	Action Demolition & Recycling, LLC	Action Demolition & Recycling LLC	Asphalt Paving Mixture Stormwater Discharge COC	Asphalt Paving Mixture Stormwater Discharge COC	Asphalt Paving Mixture Stormwater Discharge COC	Mooresville	Gaston
NCG170024	Joan Fabrics Corp-Newton Plant	Joan Fabrics Corp	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Mooresville	Catawba
NCG170028	Travis Knits Incorporated- Maiden	Travis Knits Inc	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Mooresville	Catawba
NCG170072	Artee Wrapspun	Culp, Inc	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Mooresville	Lincoln
NCG170088	Galey & Lord Indust-Gaston	Galey & Lord Industries	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Mooresville	Gaston
NCG170118	Carolina Mills Inc- Plant #1	Carolina Mills	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Mooresville	Catawba
NCG170125	Carolina Mills Incorporated-Plant 8	Carolina Mills	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Mooresville	Catawba
NCG170262	Ithaca Industries-Gastonia	Ithaca Industries	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Mooresville	Gaston
NCG170272	Armtex Inc-Gastonia Dye&Finish	Armtex Inc	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Mooresville	Gaston
NCG170311	American & Efrid Incorporated-Maiden	American & Efrid Inc	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Mooresville	Catawba
NCG170312	American & Efrid Inc-Gastonia	American & Efrid Inc	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Mooresville	Gaston
NCG170397	Century Textile Manufacturing Inc	Century Textile Manufacturing Inc	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Mooresville	Gaston
NCG170408	Meridian Specialty Yarn Group, Inc.	Meridian Specialty Yarn Group Inc	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Mooresville	Gaston
NCG170414	Delta Apparel / Maiden	Delta Apparel Inc	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Mooresville	Catawba
NCG170417	South Fork Industries, Inc.	South Fork Industries Inc	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Textile Mill Products Stormwater Discharge COC	Mooresville	Lincoln
NCG180014	Null Industries Incorporated	Null Industries Inc	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Mooresville	Catawba
NCG180016	Lee Industries Incorporated-Catawba	Lee Industries Inc	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Mooresville	Catawba
NCG180017	C R Laine Furniture Co	C R Laine Furniture Co	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Mooresville	Catawba
NCG180020	Master Carvers Of NC	Master Carvers Of NC	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Mooresville	Catawba
NCG180028	Alexvale Furniture Co-Plt 3	Alexvale Furniture Co	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Mooresville	Catawba
NCG180059	Hooker Furniture Corp-Maiden	Hooker Furniture Corporation	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Mooresville	Catawba
NCG180061	Laneventure # 10	Lane Furniture Industries	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Mooresville	Catawba
NCG180086	Hws Co Inc-DBA Hickory White	Hws Co Inc	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Mooresville	Catawba
NCG180087	Laneventure #14	Lane Furniture Industries	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Mooresville	Catawba
NCG180186	Cochrane Furniture Co Inc - Cochrane Rd	Cochrane Furniture Co Inc	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Mooresville	Lincoln
NCG180188	Cochrane Furniture Company	Cochrane Furniture Co Inc	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Mooresville	Lincoln
NCG180209	Regency Leather	Regency Leather	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Mooresville	Catawba

TABLE 2E-3: NPDES STORMWATER PERMITS IN THE SOUTH FORK CATAWBA RIVER WATERSHED

PERMIT #	FACILITY NAME		OWNER	PERMIT TYPE		REGION	COUNTY
	FACILITY NAME	OWNER		PERMIT TYPE	PERMIT TYPE		
NCG180232	RSI Home Products	RSI Home Products	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Mooresville	Lincoln	
NCG180239	Geiger International-Hickory	Geiger International-Hickory	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Mooresville	Catawba	
NCG180240	Thomasville Plant 9	David Stout of Furniture Brands	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Mooresville	Catawba	
NCG180242	Baker Furniture	Kohler Company	Furniture and Fixtures Stormwater Discharge COC	Furniture and Fixtures Stormwater Discharge COC	Asheville	Burke	
NCG200334	Webb Metals	Webb Metals	Wholesale Trade of Metal Waste and Scrap Stormwater Discharge COC	Wholesale Trade of Metal Waste and Scrap Stormwater Discharge COC	Mooresville	Gaston	
NCG200452	Action A1 Recycling, Inc.	Action A1 Recycling Inc	Wholesale Trade of Metal Waste and Scrap Stormwater Discharge COC	Wholesale Trade of Metal Waste and Scrap Stormwater Discharge COC	Mooresville	Gaston	
NCG210147	Terra Mulch Products LLC	Terra Mulch Products LLC	Timber Products Stormwater Discharge COC	Timber Products Stormwater Discharge COC	Mooresville	Catawba	
NCG210150	Universal Forest Products Eastern Division, Inc.	Universal Forest Products Eastern Division Inc	Timber Products Stormwater Discharge COC	Timber Products Stormwater Discharge COC	Mooresville	Gaston	
NCG210382	Innovative Recycling Services, Inc.	Innovative Recycling Services Inc	Timber Products Stormwater Discharge COC	Timber Products Stormwater Discharge COC	Mooresville	Catawba	
NCG210384	Pallet One	Pallet One	Timber Products Stormwater Discharge COC	Timber Products Stormwater Discharge COC	Mooresville	Catawba	
NCG210390	R-Anell Housing	R-Anell Housing Group	Timber Products Stormwater Discharge COC	Timber Products Stormwater Discharge COC	Mooresville	Gaston	
NCS000029	Hickory Springs Manufacturing Company - Hickory	Hickory Springs Manufacturing Company	Stormwater Discharge, Individual	Stormwater Discharge, Individual	Mooresville	Catawba	
NCS000074	Radici Spandex Corporation	Radici Spandex Corp	Stormwater Discharge, Individual	Stormwater Discharge, Individual	Mooresville	Gaston	
NCS000304	Ameristeel Corporation	Gerdau Ameristeel Corporation	Stormwater Discharge, Individual	Stormwater Discharge, Individual	Mooresville	Mecklenburg	

TABLE 2E-4: ANIMAL FEEDING OPERATIONS IN THE SOUTH FORK CATAWBA RIVER (HUC: 03050102)

PERMIT NUMBER	FACILITY NAME		PERMIT TYPE	COUNTY	REGION
	FACILITY NAME	PERMIT TYPE			
AWC180010	Sunny Hill Farm	Cattle State COC	Catawba	Mooresville	
AWC180012	Gladden Dairy	Cattle State COC	Catawba	Mooresville	
AWC180013	Hunsucker Dairy	Cattle State COC	Catawba	Mooresville	
AWC180023	Virgil Shull Dairy	Cattle State COC	Catawba	Mooresville	
AWC360004	Eaker Dairy	Cattle State COC	Gaston	Mooresville	
AWC360006	Proctor Dairy	Cattle State COC	Gaston	Mooresville	
AWC360017	Melvin Kiser Dairy	Cattle State COC	Gaston	Mooresville	
AWC550002	Gar-Mac Dairy	Cattle State COC	Lincoln	Mooresville	
AWC550007	Beam Dairy	Cattle State COC	Lincoln	Mooresville	
AWC550018	Treasure Chest Jerseys	Cattle State COC	Lincoln	Mooresville	
AWC550021	Piedmont Jerseys	Cattle State COC	Lincoln	Mooresville	
AWI360011	Dameron Dairy, Inc.	Animal Individual State	Gaston	Mooresville	

